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Edward G. Acheson

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BIOGRAPHIES

Edward Goodrich Acheson

Edward Goodrich Acheson was born at Washington, Pa., March 9, 1856, the son of William and Sarah Diana (Ruple) Acheson. The family name, derived from a contraction of the given name Archibald, first appeared in the records of Forfarshire, Scotland, before 1500, when it took definite form with Alexander Achesonne, the direct ancestor of our subject's family. He married Isabelle Grey and became the progenitor of the noble family of Gosford, still prominent in England.

David Acheson, grandfather of Dr. Acheson, came to America from Glassdrummond, County Armagh, Ireland, and settled at Washington, Pa., in 1788, a pioneer and business man of sterling qualities, who was four times elected to the State legislature. Among his sons were Marcus W., circuit judge of the third United States district; Alexander, judge of Washington County, Pa., and William, the father of Edward G.

On the maternal side Dr. Acheson is descended from the Goodrich family whose members achieved distinction in literature, theology and the sciences, and much of his remarkable mathematical genius may have had its origin there. His father, also a man of distinctly scientific tastes, while at the same time a successful manufacturer and business man, influenced the son's future both by example and precept, and to the counsel and guiding spirit of his mother he ascribes his fixed purpose in life.

In 1863 the elder Acheson became manager and part-owner of an iron furnace at Monticello, Pa., and here, while attending the district school, young Edward formed associations which were at least prophetic of his later career. His education began in earnest in 1870 at an academy in Bellefonte, Pa., called «The School in the Mountains.» A natural aptitude for science at once showed itself; for at fifteen he astonished his elders with a practical application of his mathematical knowledge. Soon after this he was compelled to give up school for employment in his father's furnace and in 1873 the latter's death saddled upon him grave responsibilities, the financial panic of that year seeing the end of the iron business at Monticello.

But this, while the beginning of his practical career, did not terminate the youth's education. His love for mechanics had been kindled and his naturally scientific mind needed but the opportunity of practical experience. That this should of necessity have been unusually varied was fortunate for him and for mankind in general, for it produced not only a discoverer, but a practical mind capable of applying his inventions, and a business man capable of creating a demand for them.

We see young Acheson at the age of eighteen employed with a civil engineering corps engaged in opening mines and laying railroads to them at Reynoldsville, Pa., and after that as a clerk, first in a dry goods store, and then in charge of the general store of the furnace which was formerly his father's; at twenty he becomes a promoter of a patent device, a venture which though disastrous gave proof of the young man's pluck. A year later he retrieved his fortune as ticket agent on the Allegheny Valley Railroad only to return in 1877 to civil engineering under his first employer who was now engaged in railroad construction at Bradford, Pa. This time Acheson became resident engineer of a division, and it was with energy and enthusiasm that he entered upon his new work, which offered a severe test for his rugged constitution.

In the meantime the inventive genius of the intrepid youth had found more than one opportunity for application. Before his father's death and by his advice he had invented and patented a drilling machine to be used in coal mining. Soon after his ingenuity made its first use of electricity, afterwards the most important vehicle of his genius, when by means of a galvanic battery he silver-plated a number of cheap watches and sold them at increased price. His restless nature now plunged him into a new field of inquiry, which moreover proved a source of temporary trouble. At the termination of his work in railroad construction he became a tank gauger with the United Pipe Lines at Bradford, Pa. This work was strictly

mechanical. He measured the tanks, while the calculation of their contents was left to a superintendent unwilling to divulge his wisdom.

Young Acheson determined to «find out for himself.» Discharge promptly followed, and he was able to obtain reinstatement only upon the condition that he discontinue his inquiries. He could not help using his keen powers of observation, however, and what was regarded as a second offense resulted in his reduction to office routine work; but in his superior's absence upon an imminent occasion his knowledge was utilized. His calculations discovered an error in those of the superintendent and as a consequence Mr. Acheson was promoted. Interest in scientific and especially electric subjects stimulated, his spare time was now given up to studies along those lines. He designed a small dynamo, the failure of which only fired his ambition the more, and against promises of increased salary and the persuasions of his family he set out for New York in 1880, to become a factor in electrical industry.

It was only after many discouraging refusals and out of sheer desperation that Acheson applied at Edison's famous Menlo Park establishment; and only strategy secured his acceptance. But once under the observation of the master mind, his genius could not escape recognition. While an assistant in the general draughting room Mr. Acheson set himself to perfecting his old dynamo, and asking the «wizard's» advice concerning it he discovered that it was identical with the one then unknown to him, the invention of Siemens. His transfer to the special draughting room devoted to Edison's patent appliances followed, leading the way to the original experimenting department and increased opportunity for the use of his inventive faculties. The incandescent lamp then still in its experimental stage, offered an unusual opportunity.

Having already characterized young Acheson as «a thinker» Edison selected him to produce a graphite filament and offered a prize of $100 should he succeed. The required thinness was $^{2}/_{1000}$ inch; Acheson made it 25 per cent. thinner and won the prize. The integrity of the devoted man of science now showed itself. By a very profitable arrangement he was to make 30,000 of these filaments for Edison. Finding them to be subject to disintegration after short use he gave up his contract, «not content to make an inefficient article.»

Reward to the young genius came in the greater trusts to be placed in him. After thoroughly mastering the lamp business, gaining the esteem of Edison as a «solver of problems,» he was sent to Europe as first assistant engineer for the Edison interests at the Paris International Electrical Exposition, nine months after his arrival at Menlo Park.

The exposition done with, the Edison staff were engaged in the construction of factories for the Société Edison Continentale at Ivry-sur-Seine. Besides his share in this work, the installment of plants in various parts of the continent, to be used as exhibits for Edison patents, fell to Mr. Acheson. Among these, which formed the basis for prospective Edison companies, were lighting plants in La Scala, in Milan, in a museum in Brussels, in the Antwerp Hotel de Ville and the famous Restaurant Kramopolsky, Amsterdam.

It is a notable fact that about this time Nicola Tesla became Mr. Acheson's pupil in the electric lighting business, and an illustration of the latter's grasp of that subject was given when during his stay at Amsterdam the Milan plant after being moved to another building refused to work. His diagnosis, divined on the way, proved correct, and providing the proper remedy in advance he resuscitated the plant in three days after his arrival at Milan.

Fully cognizant of his worth our young engineer now accepted an offer of the newly formed Italian Edison Company upon his own terms, namely, twice his former salary. This precipitated a break with the Paris Company and the consequent unpleasantness caused him to resign from the new post. His capital stock consisted mainly of ideas, among which the conversion of heat into electricity was now uppermost, but neither his own self-confidence and industry nor the assistance of interested friends brought material results.

There followed, then, one of those gloomy periods calculated to prove the mettle of the strongest, days in which a favorite quotation, «The worst is Death and Death shall have his day,» must have been a consolation. Darkened by poverty and sickness the brief stay in Paris and London that followed marked a low ebb in the inventor's career. Here Thomas Edison once more appeared as the guiding star and with his help, aided by the nerve he had acquired. he soon found himself again experimenting in the Edison laboratories, then in New York. This was in 1884. But the end was not yet; his purpose fixed, he felt himself unable to accept an executive position offered him by Mr. Edison and further experimental work followed upon his own account, this time in connection with a scheme for controlling electric currents, regulating dynamos, etc.

Then, after a brief employment by the Consolidated Electric Light Co., the daring delver was overtaken by a series of what men are apt to regard as failures. To the truly scientific mind, however, the word does not exist; if only it proves an impossibility, no experiment is wasted. His strong faith in his own ability is shown by his marriage at this critical time, and by the confidence which he was able to inspire in men who could capitalize his experiments.

These now concerned a new style of dynamo, that proved unsuccessful, an anti-inductive telephone wire which gave little encouragement and the reduction of iron ores by the use of natural gas at a brother's plant in Monticello, now called Gosford. This last, though in itself a failure, was accidentally suggestive of one of the greatest of Mr. Acheson's later discoveries, and the telephone wire, at last successful, opened the way out of the financially desperate situation in which he found himself now with the responsibility of a family upon him at Kittanning, near Gosford.

The new invention was a rubber-covered wire, coated with graphite and plated with a copper tube. Cotton soaked with asphaltum was next braided over it and the whole covered with a lead pipe. The central wire and surrounding insulated tube thus acted as the two conductors for a telephone circuit, their relative positions

eliminating cross talk and induction. The patent was bought by Mr. George Westinghouse for the Standard Underground Cable Co. and netted Mr. Acheson $7,000 cash and $50,000 in stocks of the cable company, the latter moreover engaging him as electrician for a term of three years.

Making his residence in Pittsburg, in 1886, Mr. Acheson superintended construction work in many other cities, and soon his restless inventive mind was again at work. Again he interested capital, formed one syndicate to support his experiments, and then another, which in 1890 he induced to build a lighting plant at Monongahela City, Pa.

According to Mr. Acheson's calculations, the plant would pay its way by night lighting, while affording the necessary opportunity for experiments. But at first the company could not meet expenses, for lack of customers. Mr. Acheson's resources were again exhausted, but he did not relax his efforts to educate the residents of Monongahela up to a proper appreciation of the advantages of electric lighting. The matter became a local political issue, and at the ensuing election the voters declared in favor of progress. This saved the situation, but through the period of uncertainty that preceded final success, the discoverer's mind was nevertheless kept active.

In the same year we find Mr. Acheson engaged on a synthetical production of rubber, which, however, was but a prelude to the great field which now absorbed his attention—artificial abrasives. The clue for this was furnished by a mere remark made to him years before and the incident, above alluded to, at his brother's furnace. So slight that none but the scientific observer, bent on ferreting out the smallest secrets of nature, would have noted it, yet here it was, stored carefully away, to become new food for speculation and the germ of a new industry. When passing natural gas into a highly heated furnace containing some clay articles, he had found these after cooling to be impregnated with carbon and, he believed, rendered harder in consequence. He now made similar experiments with clay and coke mixed and heated electrically, but was disappointed in the result. Then, by another accident, he discovered a mere bright speck or two on the end of the arc carbon carrying the electric current into the mixture. He tested this substance and found it hard. It cut glass like a diamond and—it cut the diamond. Constructing a furnace of bricks he laboriously produced enough to make a showing, and with the world's supply of «carborundum» in a phial set out for New York. The name, thus hurriedly given, like those of other great discoveries afterward proved a misnomer; for the new material was found to be carbon compounded with silicon, and not corundum.

If the discovery of carborundum was romantic, its application proved more so. A fabulously expensive product it could compete with nothing less than diamond powder, used for gem polishing. Diamond powder cost 70c. per carat, and Mr. Acheson sold the first 150 carats of his carborundum at 40c. per pound. But emery was only 5c. per pound and fire-clay but $20 a ton, so although superior to both as an abrasive and a refractory material respectively, it could compete with neither. With improved facilities a total output of four ounces per day was reached, and that far surpassed the demand of the lapidaries.

But Mr. Acheson refused to know failure. The Carborundum Company was formed September 21, 1891, with a capital stock of $150,000, one-third of which went to the stockholders of the electric light company. The emery wheel manufacturers declared their inability to turn carborundum into wheels—Mr. Acheson tried it himself and succeeded. His wheels were found most efficient to grind the joints of the new Westinghouse Electric Lamp, and that opened a new field; the valve grinders next found a great time-saver in carborundum and the price (reduced to $10 per pound) no longer prohibitive; and the dentists, by a clever and unique method of introduction contrived by Mr. Acheson himself, were convinced of the superiority of the instruments made from it. Improved methods meantime cheapened the product still more and with added power and machinery the output grew apace—always far ahead of the demand.

The sale of the European rights for an aggregate of $80,000 was negotiated by Mr. Acheson himself who went abroad for the purpose in 1894. New vistas were opened up by the utilization of Niagara Falls for the generation of electric power, but only the mind of the inventor himself could grasp the possibilities, so parting with a refractory board of directors, organizing a new one and placing his European earnings at the disposal of the company, he built a new plant at Niagara Falls in 1895. The second to avail itself of the cheaper electric power, the company contracted for 1,000 horsepower, the largest amount ever used in one bulk up to that time and requiring the installation of a special transformer, then the largest in the world.

With this accomplished, with new machinery and appliances devised by Mr. Acheson and the problem of competition thus fairly solved, nothing less than a new art had to be created to adapt the new material to existing uses. Some 200,000 different varieties of abrasive wheels are now made for the regular trade, besides a multitude of other articles. Emery, though still much cheaper, has been largely superseded in granite polishing by carborundum, thanks to the latter's six to eight times greater efficiency, and in 1898 a factory for coating paper and cloth with carborundum was added. Thus, one by one every department of the abrasive industry was exploited, and by the failures of the various manufacturers to utilize the new substance, the Carborundum Company's plant has become the only establishment in the world covering the entire field.

Large quantities of carborundum are also manufactured in bulk, and many and interesting are its uses—from grinding gems to hulling rice in India. A residue of 20 per cent. waste has become a valuable by-product through the discovery that by virtue of its 60 to 65 per cent. content of silicon it can be used as an economical substitute for ferro-silicon in steel-making. This still leaves a quantity for refractory purposes, such as furnace lining, etc. In all, the output is now 10,000,000 pounds of carborundum per year, not to speak of an «infant industry»—the manufacture of metal silicon, one of the rarest of substances, by direct reduction from sand, a process invented by Dr. Acheson.

This process was further developed by others, and also suggested the direct reduction of various metals from their oxides which he accomplished in 1903, and the production of siloxicon, a highly refractory compound used for furnace lining. The gigantic plant at Niagara Falls now uses 10,000 electrical horse-power, and is backed by a capital of $2,000,000.

Such is the story of the creation of an industry. But through it all shines the personality of the man whose genius and abiding faith alone made it all possible, and whom the world, withal, has but ill rewarded. With a great prize of life within his grasp he who had dipped deep into nature's riches brought forth only wealth to others for he was shorn of his rewards by the juggleries of "high finance." The recital stirs resentment in its perusal.

Dr. Acheson's part in the enterprise has shown him to be a great financier, in the broad constructive sense the idea of mere profit being always subordinated to his altruistic motive to give mankind the widest possible benefit of his inventions. Just as his first $60 from the New York diamond-cutter were invested in a microscope wherewith to study the structure of carborundum, so the $7,000 profit from the Westinghouse order bought the company's first dynamo. The first large return from the dental goods trade provided an exhibit at the Chicago Exposition, which led to the sale of the European interests. This in turn went to the construction of the Niagara Falls plant, which will forever stand as a monument to one of the most daring ventures in industrial history. With the plant at Monongahela using only 135 and turning out 45 tons per year—double of what the market absorbed—he now proposed to contract for 1,000 horse-power at Niagara, which meant twenty times the production. No wonder capital balked, and what but an unshakable faith and a phenomenal ability could ever have carried the undertaking through?

Dr. Acheson did it practically single-handed, and that at a time of great business depression. His resources exhausted, he unflinchingly deprived himself of a large financial interest in order to realize his dreams. He sold $50,000 worth of bonds with a large block of the company's stock (increased to $250,000 in 1895) as a bonus, to certain capitalists, who further aided the company for the security of personal notes. He even in 1897 disposed of a half interest in his German rights (not included in the former transactions), in order to secure them. He had created a new industry, worked out the details of manufacture, proved the value of his product and established a demand for it. Yet when the success of the enterprise was assured, those associated with him took advantage of his position; the reward of all his ability, his courage and his personal sacrifices was the loss of his control of the company, and on July 1, 1901, he was forced to relinquish the presidency.

Whatever of fortitude a man could muster would hardly suffice to construe so evident an injustice as a wise act of Providence. Yet what followed renders undeniable the benefits which this fortunate turn of affairs bestowed—upon mankind in general. The secret is to be found in our subject's unceasing devotion to the interests of science. The discovery of carborundum alone would have established for him a lasting fame, as would any of his later achievements, which some consider as even more important and far-reaching. Yet as early as 1895, before the new industry was fairly established he had taken out a new patent—for the purifying of carbon, and in 1896 he patented a method of making graphite.

Natural graphite, one of the most important factors in the commercial world, cannot, by any commercially practicable method, be brought to a high degree of purity. The carbon which Dr. Acheson discovered in 1895, first as the residue of decomposed carborundum freed by overheating from its association with silicon, then on the inner ends of the carbon electrodes used in the furnace, had all the properties of graphite, and further experiments resulted in a product of almost perfect chemical purity.

A company was to be organized in conjunction with the Carborundum interests to operate the carbon purifying patent and this plan, though not carried out, occasioned further difficulties, when as soon as Dr. Acheson found himself out of control, he proposed to organize the Acheson Graphite Company independently. In the meanwhile (in 1897), he had manufactured and marketed over 162,000 pounds of graphite rods to be used as electrodes in electrochemical work. Not only were they found to effectually resist disintegration, but also to have four times the conductivity of the unconverted carbon rods. Graphite was now also made by him in bulk from anthracite coal, in the form of grains, powder, etc., further patents covering its manufacture being issued in 1899, 1900 and 1902. It proved of superior value as battery filling, paint pigment, in powder glazing and in electrotyping.

The Acheson Graphite Company was incorporated January 26, 1899, for $1,000,000, to operate a plant with 1,000 horse-power electricity at Niagara Falls, and the International Acheson Graphite Company for $3,000,000, November 15, 1900, to operate the patents in Europe. Both companies were merged May 1, 1900, under the name of the latter, and the capital reduced to $500,000, the old carborundum interests with whom a compromise was finally effected resisting every step. The magnitude and growth of this industry is apparent from the fact that it now uses 5,000 horse-power electricity and manufactures graphite at the rate of over 13,000,000 pounds a year, more than is mined in all the United States.

But it was the calamitous year 1901 that started Dr. Acheson on what is perhaps the crowning achievement of his life—graphite lubrication. There are three distinct steps leading up to the final result—the first two arising from experiments that were failures for the purposes the inventor had in mind. In an unsuccessful attempt to adapt his graphite to the making of crucibles (for which purpose $1,000,000 worth were annually imported from Ceylon), he was led to make tests of the clays to be mixed with it. A series of experiments convinced him that the greater degree of plasticity and strength of the imported clay was the result of a natural addition of organic matter, and they further disclosed that a treatment with a dilute solution of tannin would produce the same result. Studying all the existing literature upon the subject he found the only reference to the use of organic matter in clay-working in the Bible, where the

Israelites of Egypt are said to have used straw in the making of bricks. While straw contains no tannin, a liquid extracted from it was found to produce a similar effect, and the clay so treated was called by Dr. Acheson "Egyptianized Clay."

This was the first "failure." The second followed an attempt in 1906 to increase the abrasive value of carborundum. Instead of a harder, a softer material was discovered, and this was the precious graphite in an unctuous, non-coalescing form, the ideal lubricating product. A patent dated November 20, 1906, secured the perfected process to the International Graphite Company, which is now marketing a mixture of the new substance with grease under the name of "Gredag," "dag" being the initial letters for "disintegrated Acheson-Graphite."

But by far the larger part of the world's lubrication is done with oil—and this fact suggested the third step. Applying the treatment which produced "Egyptianized Clay" to graphite, Dr. Acheson succeeded in rendering it so fine that it would pass through the finest of filter paper. Moreover, it indefinitely suspended in liquids, apparently setting at defense the laws of gravity. This condition, till then absolutely unknown to science, required the coining of a new word—"deflocculated." The mixture of graphite and water was named "aquadag," the "d" in this case standing for "deflocculated."

The advantages of this new lubricant over oil, besides cheapness, are the elimination of viscosity and consequent loss in power, and impossibility of explosion in air compressors. In order to mix deflocculated graphite with oil a process for separating it from the water was now devised, and the result was the most efficient lubricant known to man—namely "oildag." To market this new product the Acheson Oildag Company was incorporated for $100,000 with Mr. Acheson as president. Its use for automobile lubrication, for instance, has demonstrated that it increases the efficiency of the engine nearly 10 per cent., decreases the amount of lubricating oil necessary, retains compression in cylinders, and practically eliminates the "smoke nuisance." It also means smoother running and longer life of the bearings. Tests by scientific authorities have shown an admixture of 0.35 of 1 per cent. of graphite to double the endurance of oil, and the resultant benefits of this economy to mankind are beyond present-day calculation. When we consider that the consumption of lubricating oils is tripling every 15 years, that our supply of petroleum oils may be exhausted in 50 or 60 years, and that the general use of oildag will extend their life possibly three or four times, the name of Dr. Acheson looms large as a factor in the conservation of material resources. With aquadag as a ready and efficient substitute for oil, posterity cannot withhold due recognition to its benefactor.

Such recognition the scientific world has already in a large measure bestowed. Over 50 patents were issued for his inventions in the United States and many more abroad, and his products received grand prizes at the Paris Exposition in 1900, and the St. Louis Exposition in 1904. The University of Pittsburg conferred upon him the honorary degree of Sc. D. February 12, 1909. The John Scott Medal was given him by the Franklin Institute of Philadelphia, first for the discovery of carborundum (1899), and again for the manufacture of graphite (1901). The American Academy of Arts and Sciences awarded the Rumford medals for application of heat in the electric furnace for industrial purposes in 1907, and the Society of Chemical Industry the Perkin Medal in 1909. This last, bestowed annually for the most valuable work in applied chemistry, was a fitting recognition from fellow chemists and electrochemists of the United States to one who, though without academic training, gave a wide stimulus to electro-chemical experiments at the very inception of the science.

Upon this occasion Dr. Acheson fascinated a distinguished audience of scientists with a recital of his researches covering a period of 17 years, and tribute was paid him in glowing terms by eminent leaders of the profession. It was then that Dr. Wilder D. Bancroft, in his presentation address stated that his discoveries "mark him as one of the great inventors of the world." But aside from its practical results, his work in synthetical electro-chemistry unquestionably also places him among the greatest scientists of the age. The production of carbides in the electrical furnace; the transformation of non-graphitic carbon into graphite of over 99 per cent. purity; the direct reduction of silicon and aluminum, and the deflocculation of insoluble, non-metallic amorphous bodies are not only in themselves achievements of epoch-making importance, but they have pointed the way to new paths of scientific development and stimulated investigation along their distinctive lines with possibilities altogether beyond present appreciation. Who, indeed, could foretell the extent of utility in the economy of nature of the broad principle of the influence of organic matter upon the inorganic, as first demonstrated by the last-named of these discoveries?

Dr. Acheson's career is a lesson both to the theorist and the practical experimenter. He succeeded where others with more theoretical training had failed, because he could turn failures into triumphs through practical channels; while on the other hand he obtained practical results by the application of the scientific method of insisting on the most rigid tests at every step. This combination of the scientific and practical faculties is perhaps the most important factor in his success, and to this he added a business ability which alone would be remarkable. He discovered carborundum in specks, and then proceeded to devise the machinery, create and finance an industrial organization that could produce a million pounds of these specks in a year. Similar problems were solved by him in connection with Acheson-Graphite, and graphite lubrication, each an industry of gigantic proportions.

For all his wonderful energy, tenacity of purpose and strength of character, with which he overcame every hardship and discouragement, Dr. Acheson's manner is eminently that of the scholar—modest, sincere, gentle and dignified. All with whom he comes in contact feel the peculiar charm of his personality which, more than anywhere, is exerted in his ideal home life at Lundy's Lane, N. Y., his family consisting of Mrs. Margaret (Maher) Acheson, whom he married December 15, 1884, and nine children—five sons and four daughters. Dr. Acheson is

a fellow in the American Association for the Advancement of Science; a member of the Society of Chemical Industries, the American Institute of Chemical Engineers, the American Institute of Electrical Engineers, the American Chemical Society, the American Electrochemical Society, of which he is past president, the Franklin Institute of Philadelphia, the American Ceramic Society, the National Geographical Society, the American Mining Congress, and the Royal Society of Arts, London, England; also of the Niagara Club of Niagara Falls, the Buffalo and Park Clubs of Buffalo, the Chemists' Club of New York City, the University Club of Washington, D. C., the New York State Chamber of Commerce, the Chamber of Commerce of Buffalo, and the Automobile Club of America.

Andrew Carnegie

Andrew Carnegie was born at Dunfermline, Scotland, November 25, 1837. None even of the mighty makers of their own fortunes began closer to absolute zero; certainly none who have owed success not to fortunate speculations, but to steady labor, sagacity, and self-culture, the natural working of the highest powers on opportunities open to all and less to him than to most. His father owned a small hand-loom business, which was closed in 1848 by the competition of steam. He then emigrated to the United States and settled in Allegheny City, Pa. The 10-year-old child here became a bobbin-boy at 20 cents a day; his alertness in a few months brought him transference to an engine-room, his penmanship and arithmetic a chance to do clerical work. Next a telegraph messenger boy at Pittsburg (with a mother and younger brother to support from his slender wages), he promptly mastered telegraphy, was soon given a place as operator, and won himself extra earnings and experience in composition as a newspaper telegraph reporter. Superior fitness brought him the post of telegraphic train-despatcher to the Pennsylvania Railroad; then of secretary to its general superintendent, Colonel Scott; and in 1860, when his chief became vice-president, Mr. Carnegie was made superintendent of the western division. Meantime his business fortune had opened with the tentative adoption by the road, through his agency, of the Woodruff sleeping-car system, in which he shrewdly embarked some borrowed money; his expert knowledge made it investment, not speculation; and his dividends went partially into oil lands around Oil City, selected with equal judgment. At the outbreak of the war, Colonel Scott was made assistant secretary of war, and gave Mr. Carnegie charge of the eastern military railroads and telegraph lines, and of this department there was no complaint or scandal, and no breakdown except of Mr. Carnegie's health from overwork. He was also the third man wounded on the Union side, while removing obstructions from the Washington tracks.

Already a small capitalist, in 1862 the Pennsylvania road's experiments in replacing wooden with iron bridges led him to forecast the future monopoly of the latter, and organize the Keystone Bridge Works, which built the first iron bridge across the Ohio. To increase their profit by furnishing their own iron, he entered the field which has made him one of the industrial sovereigns of all time. The first step was the erection of the Union Iron Mills, furnaces and rolling mills; the last, after inspection of the Bessemer process in England, to establish it in this country in 1868. The story since is one of swift aggregation of plant on plant, till they had dominated their class, and became one of the chief industrial factors of the entire business world in this its greatest age. By 1888 he had acquired a controlling interest in his foremost rival, the Homestead Steel Works, and in seven other immense establishments centered around Pittsburg; in 1899 he consolidated all these into one giant structure, the Carnegie Steel Company; and in 1901 he retired from business life, transferring his company at a valuation of $500,000,000 to be merged into one still vaster, the United States Steel Corporation, formed by J. Pierpont Morgan. His United States residence is in New York; his summer establishment at Skibo Castle, in the extreme north of Scotland.

Such supreme success, fairly won in a struggle with the world, is of course the result of a supreme individual genius not to be taught or explained; but as the amount of work any one man can do unassisted is a trifle, the chief instrumentality is always the faculty of organization. Mr. Carnegie himself once said that the organization was the business; that if stripped at a blow of all his material property and business connections, but left his organization, in four years he would have re-established himself. But the organization is simply the men who work it, with their capacity of selecting capable subordinates, and undertaking public needs and the means of supplying them; and this leaves the faculty of creating and sustaining it no nearer solution than before. In the last analysis it means a nicely accurate judgment of men, resulting from an intuitive gift informed and tested by long experience: and as men are not pawns, it implies the power of persuading them into and keeping them in alliance as well.

Always a generous and helpful man, he had definitely begun, a few years before his retirement, a new existence consecrated to public service, and to which he will owe enduring remembrance. Another generation would have forgotten the mere business man, however great; for after all it could have had steel from some source, if perhaps less cheaply; but it could not have had from lesser men, and would not have had from any, the splendid, judicious and permanently useful gifts with which he has endowed it, and which no change of social ideals can render obsolete or harmful No one has ever so royally returned to the

public what he had (to its own benefit) drawn from the public. This is his own expressed conviction of duty; that "surplus wealth is a sacred trust to be administered for the highest good of the people" and that sometime "the man who dies possessed of millions free and ready to be distributed, will die disgraced." But he is equally emphatic in declaring that indiscriminate giving is mostly sheer mischief, and that no person and no community can be permanently helped except by their own co-operation. Therefore every gift of his to a community is conditioned on the latter supporting it, and all those to institutions are thought out, and so bestowed that they forward the work without impairing the springs of public interest, or the ties to the public, which must after all be their permanent stay. These gifts are mostly not to charities in the current sense, relief of material distresses, for which the spirit of human brotherhood should be adequate; but for that mental and spiritual cultivation which should raise communities out of the lowest plane of social evils. An apparent exception, which, however, is not charity but justice and business sense, is the endowment of $4,000,000 given for an annuity fund to the workers at Homestead. The remainder of his benefactions may be divided broadly into institutions for research and the discovery of fertile new ideas; those for teaching the best of ideas and their practical appliances already known; and those for storing the results of knowledge and creating and distributing them to the public—in a word, universities, colleges, and technical schools, and libraries. Even the organs he has presented to several hundred churches may be classed in this category; as he genially observed, he is willing to indorse unreservedly all the utterances of the organs, but not of the preachers. The total amount of his benefactions to date is upward of $175,000,000 of which the greater part has been given to the United States, and with much more ultimately assured.

The greatest single foundation will be the Carnegie Institute at Pittsburg, an enormous technological school, with library, art gallery, and every imaginable accessory,—the people's college of what he thinks the coming type—which has received $22,000,000 already and is promised $25,000,000 in all. Next is the Carnegie Institution at Washington, to promote original research and enable original workers to use their whole time for study, experiment, and creation; perhaps his most valuable benefaction ultimately, since new ideas are at once the scarcest and the most valuable items of the world's income, and the work of one great man outweighs that of ten generations of small ones. Of the others, perhaps the most useful, considering the work, and the chief, is the gift of $600,000 to the Tuskegee Normal and Industrial Institute in Alabama, conditioned on the trustees using enough of its income annually to free Booker T. Washington, its head, from money cares and the need of "drumming" support for his college. Sixty-five libraries in New York have received $5,800,000; one in St. Louis $1,000,000 and two in Detroit and San Francisco $750,000 each; libraries at Homestead, Braddock and Duquesne $1,000,000; and the universities in Scotland $10,000,000. In 1905 he established the Carnegie foundation of $10,000,000, the income from which provides retiring pensions for teachers in non-sectarian colleges, universities, and technical schools in the United States, Canada and Newfoundland. In 1907 he gave $750,000 toward a $1,000,000 home for the Bureau of American Republics; $500,000 for the establishment of 20 free branches of the Enoch Pratt Library of Baltimore; $50,000 to Lafayette College, Easton, Pa.; $6,000,000 additional endowment to the Carnegie Institute, Pittsburg; $125,000 to the Western Reserve University, Cleveland, Ohio; and $500,000 to the fund of King's Hospital, London, England. In 1908 he added $2,000,000 to the endowment of Carnegie Institution at Washington, to which he had previously given $10,000,000; he gave $3,000,000 to the technical schools of Pittsburg; $1,250,000 to Scotland to establish a hero fund similar to that maintained in America; $5,000,000 additional to the Carnegie Foundation for the Advancement of Teaching; $200,000 to Berea College; and approximately $100,000 in smaller gifts. In 1909 he gave $2,000,000 for the erection and equipment of a school of applied science at Pittsburg; $500,000 to the University of Virginia; $400,000 for the bureau of municipal research of New York City; $200,000 each to the Industrial School of Shelbyville, Ky., to Hamilton College, Manlius, N. Y., and to Berea College, Ky.; $150,000 to Grinnell College and the same amount for a library at Honolulu, Hawaii; $125,000 to Morris Brown College and the same amount for a library at Wellesley College; and amounts ranging from $65,000 to $17,500 to Knox, Greensboro, Coe and Wells colleges, Harvard and Wilberforce universities; and Phillips Academy. In 1910 Mr. Carnegie established a fund of $3,000,000 to be distributed among 10 cities for the benefit of their public school teachers; he made an additional gift of $500,000 to the University of Virginia; and gave $100,000 to Union College, Schenectady and other smaller sums to a number of educational institutions. In the latter part of December, 1910, he established a fund of $10,000,000 for the promotion of international harmony, dedicating the income to such objects as in the judgment of the trustees shall best "work toward the speedy abolition of war between the so-called civilized nations." He also gave $1,500,000 for a building for The Hague Peace Tribunal, made large donations to the place of his birth for municipal improvements, established a Hero Fund of $5,000,000 and has also made generous gifts to churches and charitable institutions.

Mr. Carnegie has also won fame as an author. His first works, 'Notes of a Trip Around the World' (1879) and 'Our Coaching Trip' (1882) were printed first for private circulation, but published in consequence of the great pressure for private copies. 'An American Four-in-Hand in Britain' (1883) and 'Round the World' (1884) followed; but his greatest success was attained with 'Triumphant Democracy' (1886), of which 40,000 copies were sold within two years. 'The Gospel of Wealth' (1900); 'The Empire of Business' (1902) and 'James Watt' (1905) have maintained his reputation as a clear, forcible, and interesting writer.

Philander Chase Knox

Philander Chase Knox was born at Brownsville, Pa., May 6, 1853, the son of David S. and Rebekah (Page) Knox. He was educated at Mt. Union College, Alliance, O., where he was graduated A. B. in 1872; then began reading law in the office of H. B. Swope in Pittsburg, Pa.; and in 1875 was admitted to the bar. He was appointed United States attorney for the western district of Pennsylvania in 1876, but after a year resigned to form a law partnership with James H. Reed. The firm of Knox and Reed was successful from the outset as counsel for the various manufacturing interests in western Pennsylvania. When President McKinley tendered the attorney-generalship to Mr. Knox in 1897 the pecuniary sacrifice involved was too great to permit of his acceptance, an annual income of $75,000 a year being his personal share in the firm's profits. One case, which illustrates his wonderful power of legal analysis, and which alone netted him $110,000, was that of certain Pennsylvania capitalists who bought the Indianapolis street railway system. Their counsel, ex-President Benjamin Harrison and Judge John B. Dillon, were convinced of the truth of the contention of certain rivals that the franchise was about to expire, but Mr. Knox, who was then asked to take the case, found this opinion to be incorrect, and occupied just 45 minutes in convincing the court.

Philander C. Knox

Upon the renewal of the President's offer, in 1901, Mr. Knox became attorney-general in his cabinet and retained his portfolio upon President Roosevelt's accession in the same year. Matters of the greatest importance at once came under his jurisdiction, particularly the prosecution of the beef trust, and railroads guilty of rate discrimination and illegal combination. Among the latter class was the Northern Securities Company, against which he began suit under the Sherman Anti-Trust law on March 10, 1902. This was successful, as well as that against the beef trust. Being called upon by the judiciary committee of the senate for an opinion as to what further legislation was needed to secure the success of the numerous government prosecutions then in progress, he issued a reply which sets forth with wonderful clearness the reasons and methods of forming trusts and giving the result of their operations. His recommendations, which were substantially enacted into law by Congress, provided that goods manufactured by concerns violating the law could not be carried across state lines; that both the giver and receiver of rebates be punished; that every deviation from the published rates be declared illegal, and permitted the courts to give precedence to important government cases, in order to secure speedy redress of the people's complaints.

Mr. Knox, desiring that the public should have a closer understanding of the issues involved in the various government suits which were pending, delivered a number of addresses which were both scholarly and highly instructive. He stigmatized over-capitalization as the principal evil in the operations of the trusts, associated with lack of publicity, discrimination in price, and insufficient personal responsibility of officers, and he pointed out how Congress was able to overcome these evils.

The "insular tariff case," involving the collection of duties on goods from the United States by the military authorities occupying Porto Rico before the peace treaty had been signed, and before an act providing civil government for Porto Rico had become operative, as well as the collection of duties on goods imported from Porto Rico into the United States, also was handled by him. They were extremely difficult of solution, the supreme court handing down divided opinions in most cases. The Spooner law, providing for the purchase of the Panama canal property brought another difficult problem for the attorney-general to solve. While the appointment of an expert commission to determine the title and valuation of the French Panama Canal Company was under discussion, Mr. Knox himself went to Paris and ascertained the true circumstances of the case.

The vast amount of litigation which had been undertaken by him is shown by his last report as attorney-general, which shows 3,650 civil suits and 11,043 criminal suits pending, in which the United States was a party. During that year 16,034 criminal prosecutions were terminated and the fines and penalties amounted to $641,098, and other judgments in favor of the United States, $917,693.

Having been appointed by Governor Pennypacker on June 10, 1904, to fill out the unexpired term of U. S. Senator Matthew Stanley Quay, deceased, he resigned his cabinet position on June 30th, to take his seat. In the following January was elected by the legislature for the full term. In the Senate he took an important part in the debates concerning the Lake Erie and Ohio river ship canal, which he favored as bringing the shipping of the Great Lakes to Pittsburg; on the Pure Food bills; on the Panama Canal project, in which he favored the lock type, and railroad rate regulation. As a member of important committees he drafted a number of reports, including one in favor of so amending the act creating the Spanish Treaty Claims Commission, that its decisions on individual claims growing out of the destruction of the battleship Maine could not be

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Jno. R. Allen

refuted by the United States Supreme Court or any other tribunal. This was intended to prevent further difficulties with Spain by a reopening of the discussion regarding the battleship's destruction. Mr. Knox succeeded Senator Spooner as chairman of the committee on rules, one of the most important places in the Senate, but early in 1909 he resigned his seat to become secretary of state in the cabinet of President Taft, which was tendered to him as the President's first choice. He had himself been the candidate of his state for President in the preceding Republican convention, receiving 68 votes, and the securing of his services by President Taft was held as most . :spicious for the new administration. As he had been a member of the previous Congress which had raised the salary of cabinet officers, the act as it applies to the secretary of state had to be repealed in order to make his appointment legal.

Secretary Knox is a member of the Allegheny Bar Association, and served as its president in 1897; he is a trustee of Mt. Union College; a member of the Lawyers' and Union League clubs of New York; the Americus and Duquesne clubs of Pittsburg, having been president of the latter for three years; and the Lawyers' Club of Philadelphia. He received the degree of LL.D. from the University of Pennsylvania in 1895, from Yale in 1907, and from Villanova in 1909. He is a man of scholarly habits, caring little for society, and is preeminently a hard worker. His profound learning and wonderful grasp of details have been amply demonstrated both in his private and public careers, and an essential element of his success is his capacity for disposing of matters summarily, yet with unfailing correctness of judgment. He was married in 1880 to Lillie, daughter of Andrew D. Smith of Pittsburg.

John Roberts Allen

John Roberts Allen was born in Kentucky, April 16, 1862, the son of John Wickham and Caroline (Roberts) Allen. Mr. Allen's ancestors, previous to their settlement in America, were of Scotch, English and French derivation. The American branch of the family settled in Virginia, and Mr. Allen's grandfather was born in Hanover County, not far from Richmond.

The early years of Mr. Allen's life were passed upon his father's farm and his education was only such as could be obtained from the country schools of the neighborhood. With this equipment he started at the age of 17 years upon his life's career, but he was fortunate in choosing a vocation that opened an enormous field for improvement and development, the possibilities of which were equalled only by his courage, will and boundless energy. Entering the employ of the Louisville and Nashville Railroad at a salary of $20 per month he gained an experience that was the foundation of his future success and which, broadened and ripened by several years of patient and diligent study and labor, subsequently advanced him to a position in which he received a salary of $12,000 a year.

After several years of service with the Louisville and Nashville Mr. Allen became interested in mines and railroads in Mexico, from which he soon amassed a fortune. Leaving Mexico he became connected with the Richmond and Danville Railroad with which he remained two years, resigning to devote his energies to some important work associated with the Panama Railroad Company. After spending two years in this connection the possibilities that lay in the proper development of the enormous resources of the Northwest engaged his attention and for more than 20 years he has been prominently identified with the construction of railroads and the mining industries of Washington, Oregon, California, Arizona and Mexico as well as eastern Canada.

As president of the Pacific and Eastern Railway, Mr. Allen has been largely instrumental in creating the prosperity of southern Oregon and in particular the most flourishing city in that section, Medford, which is at present the western terminus of the road. This railroad runs through one of the most fertile and productive regions of the United States. Its agricultural, horticultural, timber and mineral wealth is not surpassed on the American continent. The territory tapped by the lines of the Pacific and Eastern Railway contains the largest body of standing timber in the United States. The road also traverses Rogue River Valley, Southern Oregon, famous as the greatest fruit-raising country in the world. Railway traffic experts estimate that the value of this will in the next ten years reach the enormous sum of $10,000,000 annually, and that the Rogue River Valley will become one continuous village. It may thus be truthfully said that Mr. Allen has played a notable and vital part in transforming the entire Rogue River Valley into a habitable, well-populated and prosperous section and in opening up a veritable land of promise which can now be easily reached from any point in the United States.

While the greater part of Mr. Allen's time has been devoted to the construction and development of railroads, he has also given considerable time to other enterprises. He is the sole owner and president of the Southern Oregon Railway and Power Company, a concern of vast importance to southern Oregon and destined to become a great source of income to its owner. To each of these organizations he has brought the same ability and tireless energy, and undoubtedly much of their success is due to his able management.

Mr. Allen was married in December, 1889, to Miss Katherine Clarke, daughter of Captain Joseph B. Clarke and Jennie (Pease) Clarke. They have three children, one son and two daughters. Mr. Allen is a member of the Railroad, the Columbia Yacht, and the Automobiling clubs of New York and of the Foreign Club of Chihuahua, Mexico.

Amos Richards Eno

Amos Richards Eno was born at Simsbury, Connecticut, November 1, 1810, and on February 21, 1898, in his 88th year, passed away at his home in New York City. His ancestors, who came of an old Huguenot family, were among the first pioneers to settle in Connecticut, a James Enno (or Eno) being mentioned at Windsor as early as 1648. That this pioneer took an active interest in the affairs of the colony is witnessed by the fact that in 1664 he and six others living at Hartford and Windsor presented a petition to the court asking to be relieved from taxation for the support of ministers and officers of the Church of England unless they should receive the privileges of the church, such as baptism, communion, etc., to which, as members, they were entitled. The petitioners, however, were censured for this revolt against unjust taxation. Two years later he and John Moses, as agents for the town of Windsor, purchased 28,000 acres of land from Nassahegan, sachem of Paquonnoc, and for their services received grants of land, a portion of Mr. Eno's share remaining in the family for more than two centuries. Several of Mr. Eno's ancestors were renowned for military valor, his great-grandfather, David Eno, losing his life in the Cape Breton expedition of 1745. One of Mr. Eno's great uncles was General Roger Enos (or Eno), whose retreat from Arnold's expedition to Canada caused his bravery to be questioned, but he was acquitted with honor by a court-martial and was later offered another command by Washington, which he declined, though he afterward became prominent in the service of his country and his adopted state—Vermont. He married a daughter of Ethan Allen and is buried with the Allen family at Burlington, Vermont.

Amos R. Eno began his business career at an early age. He had a very moderate opportunity for study and his only education was that afforded by the common school in his native town. He then left home to enter commercial life as a clerk in the dry goods store of Loren Sexton at Hartford. Among his fellow clerks at this time were Edwin D. Morgan, afterward Governor of New York, Junius Morgan, the London banker, Morris Earle, Watson Case, Solomon Porter, William H. Lee, and others who subsequently became prominent in New York business circles. Being faithful and industrious and devoting his entire attention to his duties he soon learned the dry goods trade and then determined to start in business for himself. In 1833, when only 23 years of age, he came to New York, where he established himself as a wholesale dry goods merchant, but after a few months he was joined by his cousin, John J. Phelps, according to an arrangement previously made, and the two young men founded the firm of Eno and Phelps, whose reputation for integrity brought them continued success until the partnership was dissolved in 1850. This success was not attained, however, without many severe trials. At the outset they had little capital and no credit and were therefore compelled to purchase for cash, but their energy, attention to business and strict commercial habits, won for them so enviable a reputation that within a year they were enabled to obtain credit for the largest purchases. In December, 1835, however, just as they had become well established, their store was entirely destroyed by the destructive fire that swept the lower part of the city. This disaster only served to nerve them on to greater exertions and they immediately took another store and again bent their energies to building up the business, with such remarkable success that when the partnership was dissolved in 1850 both were reputed to be wealthy.

Mr. Eno had now laid the foundation of his fortune but his energetic nature compelled him to look for broader and larger fields for his activities and he began to invest in real estate, at first principally in Dey, Barclay, Warren and Chambers streets and lower Broadway. In 1854 he purchased the land at Fifth avenue and Twenty-third street, where Barnum's Hippodrome had stood, and began the erection of the Fifth Avenue Hotel, a project then considered absolutely foolhardy. But the scheme appealed to Mr. Paran Stevens, at that time the foremost hotel-keeper in the country, and he leased the building and in 1859 opened what became one of the most famous and most prosperous of American hotels. This hotel continued in operation for nearly 50 years, but in 1908 gave place to a magnificent office building, erected by some of his descendants, and known as the Fifth Avenue Building. Mr. Eno also owned many other immensely valuable pieces of property in this section of the city, notably the triangular piece at Twenty-third Street, which separates Fifth Avenue and Broadway, popularly known as the Flat-iron, and now occupied by the Flat-iron Building. This property cost Mr. Eno $25,000 but at the time of his death returned annually more in rentals than he paid for it. It was then valued at $1,000,000, while the block on which stood the Fifth Avenue Hotel was estimated to be worth $4,000,000. Two or three years before his death Mr. Eno sold his house at Fifth Avenue and Twenty-seventh Street to the Reform Club for $227,000, the lot and building representing an original investment of $25,000. It was estimated that other properties along Broadway and the Boulevard brought an annual rental of $250,000 and his entire realty holdings were reputed to be actually assessed at nearly $6,000,000. Mr. Eno was also one of the founders of the Second National Bank of New York, one of the most successful banking institutions of the city.

Mr. Eno was married to a daughter of Hon. Elisha Phelps of Simsbury, a distinguished lawyer and member of Congress from Connecticut, and a granddaughter of General Noah Phelps of Revolutionary fame. To them were born six children—four sons: Amos F., John C., Henry C., and William Phelps—and two daughters: Mary Phelps (Mrs. James W. Pinchot) and Antoinette (Mrs. Charles B. Wood). Mrs.

Amos R. Eno

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Eno was a woman of gentle, kindly spirit, of great personal charm and beauty of character and was held in veneration and greatly beloved by all with whom she came in contact, and her death in 1882 was a shock from which Mr. Eno never recovered.

Of fine figure, of dignified bearing and of unusually distinguished appearance, Mr. Eno was one of the foremost among the strong and conservative business men of the city, his opinion on important matters, particularly realty transactions, being eagerly sought by investors and freely and willingly given. Tenacity of purpose, tremendous courage, and superior judgment, combined with a high degree of intelligence and unusual foresight, were his distinguishing characteristics and were the chief factors contributing to his great success. He was possessed of a wonderfully vigorous mind which was continually active up to his last moments, and even when long past middle life he undertook the study of Latin, French and Italian, acquiring a reading knowledge of all without other assistance than his dictionaries. Until his eyesight failed he passed many pleasant evenings translating Dante, Cæsar and Victor Hugo.

One of the least impressive facts concerning Mr. Eno was the fact that he possessed wealth. Those who knew him and those who came in touch with his daily life revered and respected him for his personality, not his wealth. His was a remarkably modest, unassuming and unobtrusive nature and his unostentatious manner of living and his desire to bestow his benefactions without advertisement and without the knowledge of the recipient resulted in his being to a great extent unknown to the public at large.

His son, Henry Clay Eno, was born in New York City in 1840. He was graduated at Yale in 1860 with the degree of A. B. and in 1864 took the degree of A. M., in the same year receiving his degree of M. D. from the College of Physicians and Surgeons in New York. He also studied medicine in Paris and Vienna. In 1866 he became an interne in Bellevue Hospital, later for one year was a medical cadet in the United States Army, and for many years has been attending surgeon to the New York Eye and Ear Infirmary, Nursery and Child's Hospital and other institutions of a similar nature in New York. He is a member of the University, Century, Grolier, City, New York Yacht, Larchmont Yacht and Seawanhaka-Corinthian Yacht clubs. On October 12, 1869, he was married at New York City to Cornelia Lane, daughter of George W. and Ann Augusta (Berkeley) Lane of New York, and they have one son, Henry Lane Eno, born July 8, 1871. The son was graduated from Yale University in 1894 with the degree of A. B., and from Columbia University a few years later with the degree of LL.B. He is a member of the Yale University Club, the New York Yacht Club, the Larchmont Yacht Club and the Metropolitan Club of Washington, D. C. On October 19, 1898, he was married at Saugatuck, Conn., to Edith Marie, daughter of Peter Labouisse of New Orleans, La., and they have two children, Alice Labouisse (b. August 19, 1903) and Amos (b. August 12, 1909).

James Galway

James Galway was born at Stuartstown, North of Ireland, February 12, 1836, one of the four children of James Galway, a prominent farmer of that place, and Rachel Nelson. He received his education at the Stuartstown High School, and at the early age of 17 years decided to make his own way in the world. Believing that America offered him the greatest opportunity for rapid advancement, he accordingly came to this country, being the first member of the family to establish himself here. Upon his arrival he embarked in the grocery business and as success attended his every effort, it was not long before he had built up an enormous and highly profitable wholesale trade.

Always a lover of blooded horses he soon drifted into the sport of racing and for many years thereafter not only was an active and energetic participant in the sport but also exercised a wholesome and beneficent influence over it. His first experience was on the trotting turf, during his association with which he owned the world's champion trotting gelding, St. Julien. This horse won the championship in 1879 with a mark of 2.12¾ and in the following year repeated his first triumph, on this occasion lowering his time to 2.11¼. Shortly after this Mr. Galway abandoned the trotting turf for the running turf and there not only continued his previous success but gained still further renown. He became a member of the firm of Carr and Company and afterward of J. G. Nelson and Company, subsequently racing in the name of the Preakness Stable and later in his own name. He was largely interested in racing at Monmouth Park.

Mr. Galway owned about 40 mares and many celebrated stallions, one of the most famous of which was Ethelbert, sire of the champion of 1909, Fitz Herbert. Ethelbert raced for Mr. Galway in partnership with W. J. Arkell in 1898, when a two-year-old. Among the other well-known racers owned by him were Himalaya, which won the Nursery in 1883, Macduff, Macbeth, Linden, Bonnie Lizzie, which won in three consecutive seasons the Congress Hall Stakes at Saratoga, Rupert, Belvidere, and Meltonian. The Galway colors were black, yellow sleeves and red cap, similar to the famous magpie colors of Lord Falmouth in England, and the last horse to bear his colors was Lindale, which performed up to within a few years of Mr. Galway's death.

The horses owned by Mr. Galway were bred

at his farm at Lexington, Ky., and conditioned at the Preakness Farm, near Paterson, N. J., which he also owned. In this latter farm Mr. Galway took great pride and it turned out many horses that brought fame to him as well as to the state of New Jersey. Two of the horses owned, though not bred by him—Macduff and Macbeth—were also bred in New Jersey— at Holmdel—by Charles Lloyd, from whom Mr. Galway purchased them.

In addition to being actively interested in the training and racing of horses, Mr. Galway was also a hearty supporter of any and all measures tending to upbuild and uplift the sport, for with keen foresight he realized that racing must be kept clean and wholesome if it would maintain its high rank among recreations enjoyed by the pleasure-loving public. Before the present Jockey Club was organized he was an active member of the Board of Control, but when the latter ceased to exist, he became a member of the Jockey Club. He frequently served as a steward and in later years devoted a large part of his time in an honest endeavor to purge and divest the track of the many evils which had previously brought it into ill-repute. He was considered one of the most just and upright men connected with racing and his death left a vacancy in the membership of the Jockey Club which was not easily filled. He was extremely fond of dogs, especially Newfoundlands, and always kept one or more as his constant companions.

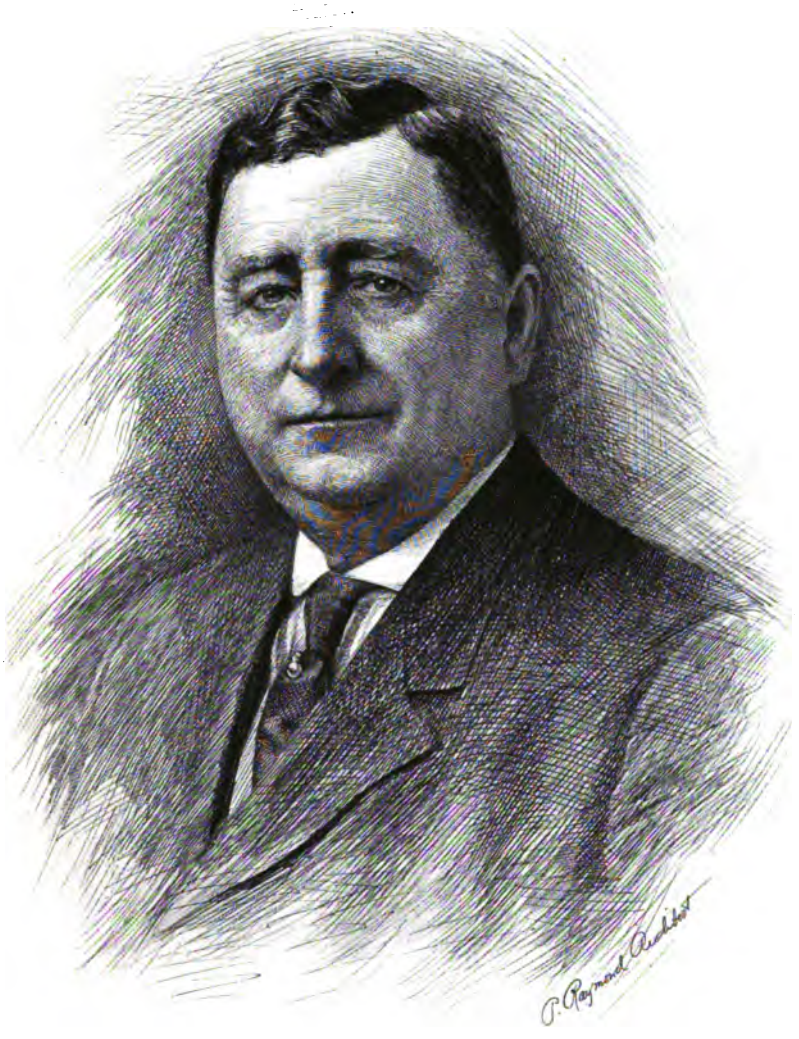
Mr. Galway was not active in the political life of his community, but he several times answered the imperative call of his fellow citizens to serve in a public capacity. He was appointed by Governor Fenton to study the systems of fire fighting used in England, and after a thorough investigation rendered an exhaustive and capable report. He also served several terms as councilman, and for 10 years was fire commissioner under the appointment of Governor Fenton.

With such a record of honesty of purpose, uprightness of character, generosity and kindness toward friends and strangers alike, efforts in behalf of clean sport and fair play, it was only natural that Mr. Galway should win a great number of steadfast friends. It was also only natural that these characteristics should be carried into his private life, and the beauty of his home and the happiness of his married life were a striking testimonial to the profound principles and high ideals which swayed his every action. In 1879 he was married to Elizabeth Van Wart, daughter of Lawrence Monroe Van Wart and Adelia Lawrence. It was at the old family homestead of the Van Warts—312 West 56th Street, New York—that Mr. Galway wooed, won and married his bride, and it was there that he lived for more than 30 years, enjoying to the uttermost the great pleasures of life such as only a charming and devoted wife and a magnificent home can give. In 1909 Mr. Galway was taken seriously ill and after a few months of suffering passed away on March 30, 1910.

Charles H. Ackert

Charles H. Ackert was born in Dutchess County, New York, February 19, 1856, the son of Fountain H. and Francis Ackert. On the paternal side he is of German descent, on the maternal side of pure American stock. His father was a farmer of moderate circumstances and the son therefore received only a public school education. He managed, however, to learn telegraphy, and in 1873, when only 17 years of age, secured a position as a telegraph operator. Since that time he has been connected with various railroads in different capacities. From 1889 to 1893 he was general manager of the Iowa Central Railroad; from the latter date until 1901 he was president and general manager of the Elgin, Joliet and Eastern Railroad; from 1901 to 1902 was general manager of the Mobile and Ohio Railroad; from 1902 to 1905 was general manager of the Southern Railroad; from 1905 to January, 1910, vice-president of the Southern Railroad; and since January, 1910, has been vice-president of the Chicago and Alton, the Toledo, St. Louis and Western, the Iowa Central and the Minneapolis and St. Louis railroads.

Mr. Ackert is a member of the Union League, the South Shore Country and the Glen View clubs of Chicago. On September 27, 1881, he was married at Moberly, Mo., to Annie L. Dugan, and they have one son, Fred (b. September 4, 1882).



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Stephen Benton Elkins

Stephen Benton Elkins was born in Perry County, Ohio, September 26, 1841, and died January 4, 1911. He was the son of Colonel Philip Duncan and Sarah Pickett (Withers) Elkins. His family originally settled in Virginia, but his grandfather removed to Ohio where he acquired large tracts of land. These were afterwards disposed of by Senator Elkins' father, who little dreamed of the valuable coal fields they contained. The latter took his family to Missouri, where the son received his education. Entering the University of Missouri, after due preparation in the common schools, he was graduated in 1860. Engaging in legal and other post-graduate studies he was admitted to the bar in 1864 and received the degree of A. M. from his alma mater in 1868. Soon after his admission to the bar he sought his fortune in the sparsely settled territory of New Mexico, where Spanish was still in common use. Gaining fluency in that language, he soon acquired a lucrative practice, and at once took an active part in local politics. He was a member of the territorial legislature during 1864-5; soon after he became territorial district attorney; and in 1868 was appointed attorney-general of the territory.

Stephen B. Elkins

In 1870 President Johnson appointed him United States district attorney for the same locality and as such he was the first to enforce the law against involuntary servitude in the territories. Thousands of slaves or peons held by Mexicans were thus set free by his energetic vigilance. He ran for Congress in 1872, and defeating his opponent, a native Mexican, by 4,000, represented the territory in the 43d and 44th Congresses. Here he became a strong advocate of statehood for New Mexico, and with his eloquence and wonderful reasoning power silenced all opposition to the enabling act, the passage of which he secured in both houses by a two-thirds vote. But the Senate, having made an amendment in which the lower house could not concur, his ultimate purpose was for the time defeated. Mr. Elkins soon gained great influence in the Republican party, becoming a member of the national committee and taking an active part in every Presidential campaign since 1884. A close friend of James G. Blaine, he was largely instrumental in securing his nomination for President in that year, repeating his efforts in favor of Benjamin Harrison four years later.

His business interests in New Mexico had in the meantime grown to large proportions, and by virtue of his extensive holdings there and his mining properties in Colorado, he was counted among the largest landowners in the country. For some time he was president of the First National Bank of Santa Fé. Business negotiations often required his presence in the East, and having married the daughter of Senator Davis of West Virginia in 1875, he later transferred his residence to that state. Joining his father-in-law, he became interested in the development of West Virginia coal lands, which became the chief source of his great wealth. He also gave considerable attention to railroading, becoming vice-president of the Piedmont and Cumberland Railway Company, and the West Virginia Central and Pittsburg Railway Company. In the midst of the lands he developed, he founded the town of Elkins, in Randolph County, and on a mountain site overlooking his vast estates, built a beautiful country seat, which he called "Halliehurst" after his wife.

In 1891 President Harrison appointed him secretary of war in his cabinet, and during the two years that followed, he devoted his best efforts to the administration of that office, returning to the management of his business affairs in 1893. Two years later, however, the legislature of West Virginia elected him to the United States Senate, and by re-election in 1901 and 1907 he continued to represent the interests of his state in the upper House at Washington until his death in 1911.

Senator Elkins demonstrated himself to be one of the most astute and powerful political leaders of his generation, while at the same time he loomed very large as a factor in the business and industrial world. A strong man physically, as well as mentally, he yet had the attributes and preferences of the scholar, being a great lover of the classics. A profound patriotism and a love for his adopted state actuated him throughout his career. He was married first on June 10, 1866, to Sallie Jacobs, of Wellington, Mo., and second on April 14, 1875, to Hallie, daughter of Senator Henry Gassaway Davis of West Virginia.

William John Tully

William John Tully was born at Corning, N. Y., October 1, 1870, one of the five children of Joseph J. Tully, who for 40 years was a glass manufacturer at Corning, and Sarah Byers Tully, his wife. He was educated at the public schools of Corning, then attended public school number 15 at Brooklyn, N. Y., graduating in 1885, and afterward studied at Corning Academy, whence he was graduated in 1888. From 1888 to 1889 he attended the Brooklyn Polytechnic Institute and in 1890-91 the Columbia College Law School, supplementing the latter course by a course in the New York Law School, from which he was graduated in 1892 with the degree of LL. B.

In 1893, having been admitted to the bar, he commenced the practice of law alone at Corning, but afterward became a member of the firms of Mills and Tully, Page and Tully, and Page, Tully and Ferris. In 1908 he gave up the practice of law at Corning that he might open an office in New York City and thus allow his talent and energies to have a wider range of activity. During these years, however, he had taken an extremely active part in the political life of his city, county and state. From 1894 to 1896 he was recorder of the city of Corning; from 1902-4 was chairman of the Steuben County board of supervisors; and from 1904 to 1908 represented his district, the forty-first, in the upper house of the New York legislature, in the latter year resigning from this office to engage in the practice of law in New York.

During 1905 and 1906, while a member of the State Senate, he served on the legislative committee, known as the Armstrong Committee, that investigated the affairs of the life insurance companies in New York. A dispute between officers of the Equitable Life Assurance Society has arisen and become public and even a superficial investigation of the affairs of this company revealed an infamous conditions of affairs. The scandal finally became so great and the evil results of allowing such practices to continue any longer were so plain that it was decided not only to put a stop to operations of this nature in all insurance companies but also to enact legislation that would place the whole insurance business upon a more safe and sound basis. The appointment of the legislative commitee then followed and the subsequent investigation occupied several months' time. It is not necessary here to mention the details of the startling transactions that were brought to light, but the work of the committee resulted in revealing a strange and awful medley of masquerade balls, "yellow dog funds" for corrupt purposes, huge contributions to political parties, false reports to state departments, "fake" entries in books to cover iniquitous uses of money, the payment of vast sums to persons who rendered no adequate service, and other questionable practices. The report of the committee was rendered to the legislature in the early spring of 1906 and many of the recommendations of the committee were afterward enacted into law.

The insight into the whole field of insurance which Mr. Tully gained from his connection with this investigation subsequently resulted most advantageously to him. On October 1, 1908, shortly after he had engaged in the practice of law at New York, he was elected attorney to the Association of Life Insurance Presidents and on October 1, 1909, he became general solicitor of the Metropolitan Life Insurance Company. In 1909, in recognition of his eminent services, Alfred University conferred on him the degree of doctor of laws.

Mr. Tully is a member of the Corning Club, the Fort Orange Club, of Albany, the Manhattan, Calumet and Republican clubs, of New York, and of the Association of the Bar and the New York County Lawyers Association. On October 5, 1898, he married at Corning, N. Y., Miss Clara M. Houghton, daughter of the late Amory Houghton, Jr., for many years president of the Corning Glass Works. They have two children: Alice Bigelow (b. September 11, 1902), and Marion Gordon (b. May 4, 1904).

William Barr

William Barr was born in the town of Lanark, Scotland, October 7, 1827, and was one of the five children of Mark Barr and Anne Curr. He was educated at private schools in Lanark and when only 13 years of age came to America. Immediately after his arrival in this country he engaged in business in New York with the dry goods firm of Ubsdell and Peirson, then located at the northeast corner of Canal and Mercer Streets. By hard work and industrious application to his duties he was gradually promoted from one position to another until he had reached the highest position in the service of the firm to which he could at that time attain. From a salary of $2 per week on which he had started as a boy he advanced to $1,000 a year, the highest salary paid in those days to any salesman.

The firm of Ubsdell and Peirson had become financially interested in a dry goods house at St. Louis established in 1849 as H. D. Cunningham & Company. In January, 1854, this house was merged with the New York firm and Mr. Barr was sent to St. Louis to manage that

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William Barr

branch of the business, at the same time being admitted to partnership, the name of the firm being then changed to Ubsdell, Peirson & Company. Now for the first time Mr. Barr was presented with the opportunity to display the business acumen and great executive ability for which he was noted and he most earnestly grasped the opportunity. With a keen foresight and a marvelous understanding of the needs and requirements of the public, he set about the work of building up the business. He had noticed the unattractive manner in which merchandise was displayed in the windows of the St. Louis store and immediately upon assuming control he instituted many radical changes. A mounted deer that had become unfit for display purposes was first cast aside and the space it occupied was used to present to the public the various classes of merchandise that could be purchased within. Mr. Barr believed that much trade was lost because the public was not acquainted with the contents of his store and he therefore caused his goods to be arranged in pleasing and beautiful designs in order to attract attention. Another innovation was the placing of gas lights in his store windows—against the advice of many who believed this policy foolhardy, absurd and ruinous. But he was firm in pursuing his plans and the enormous business which he transacted and the wealth that he amassed in subsequent years were a complete justification and vindication of the many new plans and methods which he put into operation.

The firm of Ubsdell, Peirson & Company was soon succeeded by Ubsdell, Barr, Duncan & Company, Barr, Duncan & Company, and William Barr & Company and the transactions of the firm eventually grew to such proportions that Mr. Barr purchased the interests of the other partners and incorporated the business under the name of The William Barr Dry Goods Company, with himself as its president. The firm eventually became one of the largest houses of its kind west of the Mississippi. For about 40 years Mr. Barr had made his home at Orange, New Jersey, going to St. Louis each year to give his business affairs in that city proper attention, but in July, 1905, when 78 years of age, he abandoned this practice and retired from the firm, though he still retained his property there and his interests in the other corporations with which he was connected.

It was in his private life, however, that Mr. Barr was most appreciated by those who knew him best, and in his home the great beauty and sublimity of his character as a man and as a husband were exemplified by untold deeds of kindness and love, for while his material interests had vastly increased, his nature and disposition always remained the same—kindly, simple, loving, generous to a fault and ever ready to extend the uplifting hand. While his gifts to charities were numerous and substantial they were always bestowed unostentatiously. Both Mr. and Mrs. Barr maintained a separate fund for charitable purposes which each expended as deemed most wise, and whenever Mrs. Barr's donations exceeded this amount, Mr. Barr was ever ready to give her as much more as she requested. For many years Mr. Barr was a regular contributor to the benevolent institutions of St. Louis, particularly at Christmastide, and after moving to Orange, he continued his customary munificence. In Orange, Mr. and Mrs. Barr soon became prominent in charitable work and beside almost innumerable minor gifts, they gave largely to the work carried on by Grace Episcopal Church, to the endowment funds of the Orange Memorial Hospital and to the House of the Good Shepherd, presenting the extension and in 1907 the Chapel of St. Margaret to the last named.

Mr. Barr was a member of the Metropolitan Museum of Art, the Geographical Society and the Botanical Society of New York, the St. Louis and the Merchants clubs of St. Louis, and the Essex County Country Club of Orange, N. J. On August 30, 1855, he was married to Miss Jessie R. Wright, daughter of John Wright, a native of Ayrshire, Scotland. Mr. Barr did not long survive his golden wedding anniversary and on June 15, 1908, after a long illness, passed away at his residence, Baronald, Llewellyn Park, Orange.

James Brooks Dill

James Brooks Dill was born at Spencerport, N. Y., July 25, 1854, and died at East Orange, N. J., December 2, 1910. He was the son of the Rev. James H. Dill. Shortly before the Civil War Judge Dill's father moved to a Chicago pastorate. James B. Dill received his common school education in Chicago, and prepared for Yale at the Oberlin Academy. He went to college a poor boy, and was graduated with honors from Yale in the class of 1876, knowing very well what it was to be on his own resources, for he had worked his way through the university. After teaching a short time in Philadelphia he obtained an appointment as instructor in Latin and mathematics at the Stevens Institute, Hoboken, and spent his nights studying in the New York University Law School in this city. Admitted to the bar in 1878, with a capital of $40, he eked out the income of a young lawyer just beginning to practice by doing such newspaper work as he could find, and, as he sometimes said in later years, walked up and down town to save carfare.

It was when the era of corporate consolidation came upon the country that Judge Dill first came prominently into the public eye. He had, meantime, established his place at the bar both in New York and New Jersey. Among other things Judge Dill worked out the idea that has since become of almost general adoption of organizing a corporation to organize

other corporations. The Corporation Trust Company of New Jersey, which later, in other hands, figured largely in the United States Shipbuilding Company disclosures, was probably the first of its kind in the country, and has been copied again and again.

The story most generally told of Judge Dill was that of his part in the settlement of the Frick-Carnegie fight, leading up to the formation of the United States Steel Corporation, and the $1,000,000 fee he is reputed to have received as a result. But the thing that will be longest remembered by the present generation in Wall Street is the part he played in the days of the shipbuilding and insurance investigations, and his rescue, particularly, of a group of men who had been invited into the old Trust Company of the Republic after that institution was hopelessly involved in the United States Shipbuilding promotion, from the predicament in which they remained when the crash came. The intended victims, prominent among whom were George C. Boldt, Perry Belmont, and Stuyvesant Fish, were confronted, as the remaining directors of substance in the Trust Company of the Republic, with some measure of personal liability on about $7,000,000 of suits. Then started a four years' warfare on the Shipbuilding Trust promoters, which ended with most of the suits being settled elsewhere. Such suits as were settled on behalf of the Trust Company of the Republic brought in bonds of the old Shipbuilding Company exchangeable for Bethlehem Steel Corporation securities, and it has always been understood that the men on whose behalf Judge Dill made his fight got off practically whole.

When Stuyvesant Fish made his fight to clean up the Mutual Life Insurance Company following the insurance investigation of 1905 and the disclosures of mismanagement under the McCurdy régime, he retained Judge Dill as counsel for the investigating committee. The latter had already practically retired from active practice to accept an appointment to the New Jersey Court of Errors and Appeals at the $3,000 salary which that state pays its judges of last resort. His public services, in addition to the judgeship, included membership of the commission appointed to frame the Roosevelt corporation act when Roosevelt was governor of this state, and a trusteeship at Smith College, where his two daughters were graduated. Judge Dill was a thirty-third degree Mason, and had been for several years before his death president of the New York University Law School Alumni Association. He was a director of many corporations.

Julge Dill was a great lover of outdoor life and in the prosperity of his later years, when horses, and then automobiles, were put down as his chief hobby, there was no hour which found him so content as when he was roughing it in his camp in the Rangeleys, or tramping over some half-forgotten road in the Jersey Hills.

Philo Miles Beers

Philo Miles Beers was born at Cornwall, Conn., July 23, 1835, one of the eleven children of Alpheus Beers and Tabitha Clark Lewis. Mr. Beers obtained only a meagre education, his schooling being given him by his father and mother during the few moments they could spare from their daily tasks. Owing to the large family the time devoted to each child was necessarily small and therefore the young man began his long career with a very inadequate equipment.

In his youth Mr. Beers was possessed of a great desire to become an artist, but his hopes were soon blasted, for when only 12 years of age he was bound out to a farmer in Connecticut, and during the next three years his only training of any kind consisted of driving a cart and undergoing the toil and drudgery of a farm hand's life, the struggles and hardships of which can only be known to those who have actually passed through the experience. But the hard work of the farm, while it did not add anything to the stock of book-lore possessed by the boy, at least gave him a strong constitution and a rugged health that could not be undermined even by advancing years.

Having served a term of three years on the farm the young man, when 15 years of age, was next apprenticed to the carriage-makers' trade, and continued to work at this trade for about two years. His salary at this time amounted to the munificent sum of $30 per year and his board, but he was compelled to furnish his own clothing. From there he went to Terryville, Conn., to work in the Eagle Lock Shop, where he remained until 1858 when he entered the employ of the Wheeler & Wilson Manufacturing Company, manufacturers of sewing machines, at Bridgeport, and with this company he remained for the long period of 52 years, ending in March, 1910.

When Mr. Beers first went with the Wheeler & Wilson Company, all sewing machine needles were made and finished by hand, and it was not long before the young man perceived that the sewing machine would become so universally used as to preclude the possibility of making by hand a sufficient quantity of needles to supply the demand. For many years, however, the sewing machine was regarded with suspicion, and the early pioneers of the trade were compelled to undergo many severe trials before the sewing machine became an established institution in every household. Strange as it may seem in this age of wonderful mechanical appliances, the populace at that time were so distrustful of inventions that would radically change the methods of manufacturing, that even

Philo M. Beers.

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Mr. Wheeler himself, when attempting to introduce the machine in one of the nearby Connecticut towns, was stoned by a mob and ordered not to enter the town again, and this experience was repeated in several other places.

But when the great advantages of the machine were grasped, the manufacturers were almost unable to keep apace of the demand and this demand has not only not diminished, but at the present time more machines are being manufactured and sold than ever before. Mr. Beers, therefore, determined to invent some method of manufacturing needles by machinery, and in this no amount of education could have benefited him—it was simply original inventive ingenuity that was necessary. That Mr. Beers possessed inventive ability to a marked degree is witnessed by the number of appliances that he invented, and the machines made under his plans for the manufacture of needles practically revolutionized the industry. Whereas in the early days of the industry the output of needles made by hand was very small, the machinery invented by Mr. Beers has made possible the manufacture each year of nearly 12,000,000 to 17,000,000 needles at an infinite saving of labor, material and cost, thus greatly reducing the retail price.

But while Mr. Beers was occupied with his inventions he was not remiss in his duties as a citizen. When the Civil War necessitated the calling out of volunteers for the Federal army by President Lincoln, Mr. Beers volunteered on the first call and fought in the first battle of Bull Run. Upon his return home from military service he again took up the threads of his daily life where they had been severed and continued his work for the Wheeler & Wilson Company. Subsequently he served for two years as a member of the Bridgeport Common Council. He is a member of the Sea Side Club, the Grand Army of the Republic, and the Odd Fellows, and is also a thirty-second degree Mason. He is fond of out-door sports, especially golf and rifle shooting, and is a member of the Reedmore Rifle Club. On October 12, 1861, he was married at Bridgeport to Augusta S. Hubbard, daughter of Timothy Hubbard, and to them five children were born, one son and four daughters. Mrs. Beers was well-known throughout the State, particularly for her charities. She was a member of many charitable associations, and the objects of her beneficence were many and varied. Mr. Beers has now retired from active participation in business affairs, and his various interests are capably managed by his son, John William Henry Beers.

Howard Barclay French

Howard Barclay French was born at Salem, Columbiana County, Ohio, September 3, 1848, the son of Samuel H. French, a native of New Jersey, and Angelina (Dunseth) French, a native of Baltimore, Md. He is sixth in line of descent from Thomas ffrench, who with his wife, Jane (Atkins) ffrench, and nine children arrived at Burlington, N. J., in the ship Kent, July 23, 1680, from Northamptonshire, England. When the religious Society of Friends arose in England, Thomas ffrench, then a very young man, with other members of his family, became actively identified therewith, and was compelled to endure at different times severe persecution and suffering on account of his faith. It was owing to these religious persecutions that Thomas ffrench was led to take a practical interest in the early colonization of Friends in America; and with William Penn, Gauen Laurie, Thomas Ollive, Daniel Wills, Edward Byllynge and about 150 others, he signed in London, in 1676, the famous "Concessions and Agreements of the proprietors, freeholders and inhabitants of the province of West New Jersey in America," the purpose being to found a model commonwealth in which the largest measure of individual liberty was to be allowed, consistent with the protection of the rights of all. He settled upon a tract of some 600 acres of desirable land located along the banks of the Rancocas, about four miles from Burlington, N. J., and throughout the remainder of his life he held an influential place in the colony, being a man of great force of character, intense religious conviction, resenting in the extreme everything bearing the slightest resemblance to injustice or oppression. At the time of his death in 1699, in addition to the property which he owned in England, he was possessed of some 1,200 acres of improved land, and also his proprietary share of unsurveyed lands in New Jersey, approximately 2,000 acres. It was from Thomas ffrench's son Charles that the subject of this sketch descended.

Since early childhood, Howard Barclay French has been a resident of Philadelphia, and for more than 35 years a leading business man of that city. After receiving an academic education in Friends' Schools, he served a three years and six months' apprenticeship in the retail drug store of William B. Webb, during which time he attended the Philadelphia College of Pharmacy, graduating from same in 1871. A month later he entered the employ of his father's firm, French, Richards and Company, wholesale druggists and paint manufacturers, established in 1844. He devoted himself to mastering the details of the business, and in July, 1872, was transferred to the manufacturing department. While thus engaged he determined upon a professional career, and in 1879 entered Jefferson Medical College. Here he pursued the regular course of study, in addition to onerous duties in the office of the above mentioned firm, until his father earnestly remonstrated on account of the severe strain upon his health and persuaded him to relinquish the idea of adopting a professional life, which he reluctantly consented to do, with the understanding, however, that at the expiration of the then existing partnership agreement, the manufacturing department of the business should be separated from

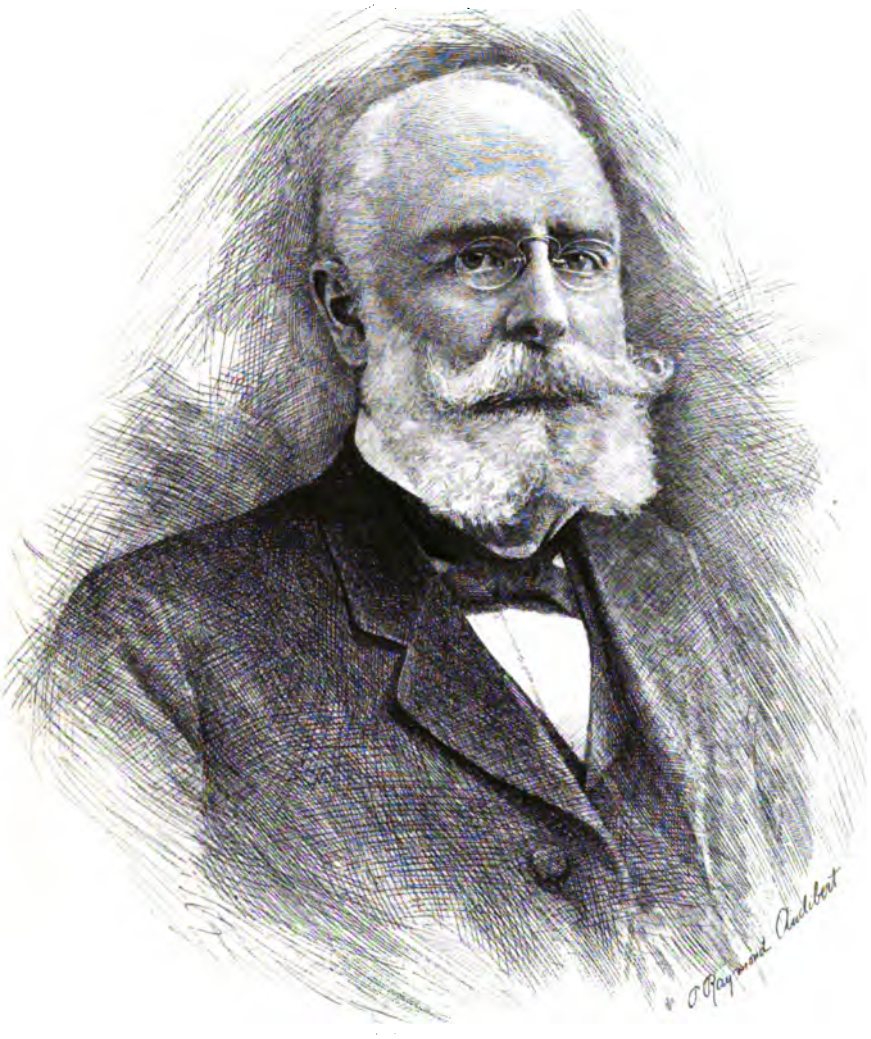
the drug department. And in January, 1883, Howard B. French, with his brother William A., joined with their father, Samuel H. French, and John L. Longstreth in forming the firm of Samuel H. French and Company, which succeeded the manufacturing branch of the old firm.

In 1886 the death of William A. French occurred, and in 1895 the death of Samuel H. French; and upon the retirement of John L. Longstreth in 1901, Mr. French became the sole proprietor of the business, retaining the firm name of Samuel H. French and Company. Under his vigorous personal direction every department of the business has greatly increased. Throughout the drug and paint trade Mr. French is highly esteemed. For over 20 years he has held an influential position as chairman of the executive committee of the Philadelphia Paint Manufacturers' Club. In Chicago, in 1895, he was elected president of the National Paint, Oil and Varnish Association.

In the financial world Mr. French occupies a foremost place, his advice being sought by men of conservative views and methods. He became a director of the Equitable Trust Company of Philadelphia, at its organization in 1890, and in 1902 was elected to the presidency, fulfilling the exacting duties of this responsible place to the complete satisfaction of all concerned. Under his watchful administration the business of the institution has very largely increased. He has been much interested in education and organized charity, serving for many years as one of the managers and trustees of the Philadelphia Southern Home for Destitute Children, the oldest institution of the kind in Pennsylvania; and also as a manager of the Home Missionary Society. By appointment of the Governor, he is a member of the Pennsylvania State Board of Charities, devoting much time and attention to the discharge of the duties of this important trust. A labor of love with Mr. French for 40 years has been his service as trustee, and for the past 10 years as president of the Philadelphia College of Pharmacy, the oldest and largest institution of the kind in the world. It was chiefly due to his energy and initiative that extensive improvements and additions were made to the college building in 1892. Acting as chairman of the building committee, he personally superintended every detail of construction; and to his zealous care the college is greatly indebted for its high standard of efficiency and continued usefulness. He has made many munificent gifts to the institution, one of the most noted of which was the presentation, in connection with the Smith, Kline & French Drug Company, of the Martindale Herbarium. This collection, which enjoys an enviable reputation, is one of the finest in the United States, consisting of over 200,000 specimens from all parts of the globe and embracing numerous collections made by eminent botanists.

As a public spirited citizen Mr. French has been a conspicuous and active figure in many leading organizations of a commercial, patriotic and social character. Since its organization, in 1890, he has been a director of the Trades League of Philadelphia (now Chamber of Commerce), taking a zealous and self-sacrificing interest in every movement relating to the promotion of the business interests of the city, serving as chairman of many of its most important committees; and largely if not entirely through his instrumentality and suggestion the city of Philadelphia established a high pressure water system for fire service, and the recreation piers along Delaware Avenue. He has frequently represented the Trades League (now Chamber of Commerce) as delegate to the National Board of Trade. By appointment of the governor he was a delegate to the convention at Tampa, Florida, in 1896, to devise methods for the proper defence of the Gulf and South Atlantic harbors of the United States, and was a member of the executive committee of the Tennessee Centennial Commission of Philadelphia. He was secretary of the Union Committee on Transportation, Manufacturing and Commercial Interests of Philadelphia, which did work of inestimable value for the improvement of the transportation facilities of Philadelphia. He has also served as a member of the advisory board of the Commercial Museums, and is now a member of its board of trustees; and as a director of the Manufacturers' Club and of the Franklin Institute. He was chairman of a joint committee of the commercial organizations of Philadelphia, and also of the sub-committee, on the selection of a new site for the United States Mint, 1893-94. To this work he devoted himself for many weeks, holding frequent conferences with the Federal authorities, both in Philadelphia and Washington. It was undoubtedly very largely through the energetic action of this committee that the mint was retained in Philadelphia, and the chairman's services in this connection were especially appreciated by the secretary of the Treasury.

For 37 years Mr. French has been a member of the Union League, being one of the board of directors for several years. He has always been notably active and earnest in upholding the highest political and official standards. He was particularly vigilant as chairman of the Citizens' Committeee of '95 for good city government, and also as a member of the Business Men's Republican League of 1895. During the administration of Mayor Warwick, from 1895 to 1899, Mr. French served as a member of the Civil Service Commission of the city, examining upwards of 2,000 applicants, about 87 per cent. of whom were found deficient in the requirements of the places in the public service which they sought. In the great national contest of 1896 he was vice-chairman of the McKinley and Hobart Business Men's National Campaign Committee, and after the successful termination of the campaign the President-elect and Chairman Hanna made grateful acknowledgment, both in person and by letter, of the effective services rendered. In 1898 he was president of the National Republican League of Business Men. At the time of the holding of the Republican National Convention of 1900, in Philadelphia, Mr. French was chairman and member of several committees of prominent citizens who superintended arrangements for the convention and extended special courtesies to the delegates and leading men present from different parts of the country. During the memorable Founders' Week celebration, October 4-10, 1908, commorating the 225th anniversary of the founding of the city of Philadelphia, Mr. French was especially active in a representative capacity in



Howard B. French

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connection with the various industrial, patriotic and social features of that occasion. And in furtherance of his interest in every movement to promote the commercial prosperity of Philadelphia, he is serving on a special committee on transportation and railroad terminals, co-operating with the mayor in a far-seeing effort to provide ample facilities for the enlargement of trade and the adjustment of various interests; and the completion of the comprehensive plans for the improvement of the city.

Mr. French has always taken deep interest in the landed affairs and early history of New Jersey, in connection with which his ancestors played a notable part. He holds the right of proprietorship in unlocated lands, which has succeeded from one generation to another for over 200 years. He was one of the originators and president of the New Jersey Society of Pennsylvania, organized in 1907, and is now a director. He is also a member of the Ohio Society of Philadelphia and is vice-president of same. It is to his enthusiasm, persistent research and liberality that the French family and its allied branches, as well as others interested in genealogical matters, are indebted for the interesting work he has recently published: 'The Genealogy of the Descendants of Thomas ffrench, 1630-1903' (2 vols.), representing a large expenditure and many years of painstaking inquiry.

Mr. French married in 1882 Ida Colket, daughter of Coffin Colket, who was actively interested in transportation companies, and president of many. One child is living, a daughter; and a son died in infancy.

Judson Harmon

Judson Harmon was born at Newton, Hamilton County, Ohio, February 3, 1846, the son of Rev. B. F. and Julia (Bronson) Harmon. The family is of English origin, Francis Harmon, its first American representative, having emigrated to Massachusetts in 1636 and settled at Boston. The emigrant's son, John, was one of the pioneers who settled Springfield, Mass., and Suffield, Conn. Governor Harmon's father was a Baptist clergyman, who conducted his son's preparatory education privately and then sent him to Denison University, Granville, O., where he was graduated A. B. in 1866. Young Harmon spent his first year out of college in teaching school, but determining upon a legal career, entered the Cincinnati Law School, and while pursuing his course there received his practical training in the office of Hon. George Hoadly. He was graduated LL.B. in 1869, was admitted to the bar, and began to practice his profession at Cincinnati. He soon became prominent in the Democratic party, supporting Horace Greeley for the presidency in 1862, and three years later was elected mayor of Wyoming, O., of which place he had become a resident. In 1876 he was chosen judge of the court of common pleas, but his seat was successfully contested in the state senate. Two years later, however, he was chosen judge of the superior court in Cincinnati, and served by re-election until 1887, when he again turned his attention to the practice of law. On June 8 he was called from retirement by his appointment as attorney-general in the cabinet of President Cleveland. Here his profound learning and distinguished ability as a lawyer became nationally recognized. The criticism of President Cleveland for calling out the federal troops at the time of the Chicago strike was ably refuted by him in an answer to William J. Bryan, and other of his official utterances received widespread attention. The international complications of Cleveland's second administration presented many severe problems to the department of justice and a number of very important government cases were argued by him before the United States Supreme Court. He resigned his portfolio on March 6, 1897, to resume the practice of his profession, having been appointed in the previous year professor of law in the University of Cincinnati.

Judson Harmon

During 1895-99 he was receiver for the Cincinnati, Hamilton and Dayton, the Père Marquette and the Toledo Terminal railways. In the latter year he became governor of Ohio, having been elected in the previous November, by a plurality of 19,372 over Governor Andrew L. Harris, Republican. He set about with energy to give the state a business-like and clean administration, which received nationwide commendation and at once put him in the front rank of Democrats available for the highest national honors. A number of important reforms were enacted during the first year of his administration, and as the Ohio legislature meets only bi-annually he called a special session in 1908, at which acts providing for the medical inspection of schools and regulations of the liquor traffic were passed. He was a candidate for re-election in 1910, his opponent being Warren G. Harding, whom he defeated in the great Democratic landslide that followed, by the greatly increased plurality of over 50,000. Governor Harmon was president of the Ohio Bar Association during 1897-98. He received the degree of LL.D. from Denison University in 1891. In June, 1870, he was married to Olive, daughter of Dr. William H. Scobey, of Hamilton, O., by whom he has three daughters.

George Hezekiah Middlebrook

George Hezekiah Middlebrook was born at Ballston Spa, New York, February 4, 1865, the only son among the three children of Hezekiah Middlebrook and his second wife, Mary (Oakley) Bennett. He is of Dutch parentage, the first representative of the family to arrive in this country being Joseph Middlebrook, who came here from England in October, 1635, and settled at Concord in Massachusetts Bay Colony. There was much dissatisfaction among the colonists, however, because of excessive taxes and in 1644 sixteen families, among whom was Middlebrook, moved to Fairfield, Conn., where Mr. Middlebrook subsequently became the owner of about 858 acres.

The family has always borne its share of the civic burdens of the communities in which they have resided and have also been active and prominent participants in the wars fought for the preservation of the colonies and the nation, seven members of the family being enlisted in the early Indian wars, two in the early colonial wars, thirteen in the Revolutionary War, eight in the War of 1812, one in the Seminole War of 1836-42, and three in the Spanish-American War and the Philippine insurrection. In the Civil War the family was divided in sentiment, the southern branch sending 42 representatives to the Confederate army while the northern branch sent 19 members to the Union army. The great grandfather of George H. Middlebrook—Hezekiah Middlebrook, Sr.—was a soldier in the army of King George II during the French and Indian War in the campaign of 1758 in northern New York, and many anecdotes are told of his marvelous escapes from Indians. At one time he owned over 1,000 acres of land about Ballston and was one of the 25 founders of the Presbyterian church in 1775. He was also one of the first white settlers north of the Mohawk River, was one of the committee of safety during the Revolution and a member of old Franklin Lodge No. 57, F. and A. M., when organized in 1794.

George Hezekiah Middlebrook received his early education in the public schools of his home town, was then sent to the Albany Business College, and upon his graduation from that institution attended the Beloit Academy at Beloit, Wis. After completing his education he embarked in business as proprietor of the Beloit College book and stationery store, and for many years thereafter was connected in some manner with the publishing trade. In 1891, with Mr. F. W. Shumaker, he founded the firms of Middlebrook and Shumaker, and Middlebrook, Shumaker and Company, publishers' agents and publishers, the operations of these firms being gradually extended until there were branch offices in the principal cities of the western and southern states, such as Spokane, Seattle, Portland, Butte, Salt Lake City, Dallas, Atlanta, etc.

In 1895 the interests of this business were sold and the partnership dissolved, and in the following year Mr. Middlebrook became traveling auditor for the Werner Company, publishers and lithographers, but he left this position to re-enter the publishing business for himself as a member of the firm of Belford, Middlebrook and Company of Chicago, who subsequently published the Stoddard Lectures, a dictionary encyclopedia and numerous other works. After a short period in business with this firm he purchased an interest in 1901 in the publishing house of John D. Morris and Company of Philadelphia, with whom he most ably filled the office of treasurer until 1904, when he severed his connection with the firm to assume, in company with Mr. Shumaker, the management of the mail order department of Doubleday, Page and Company. In 1906 after thus spending a long, honorable and useful career in the publishing business Mr. Middlebrook decided to branch out into an entirely different line of commercial activity, and upon the formation of the Sterling Debenture Corporation, which was organized for the purpose of selling stocks, bonds and other valuable properties of a like nature, he became its treasurer. In 1907, when the president withdrew, he and Mr. Shumaker secured the ownership of the corporation, Mr. Middlebrook becoming president, in which position he has remained ever since, by brilliant executive ability and careful and conservative management creating a large and profitable business for the company.

In addition to his duties as president of the Sterling Debenture Corporation, Mr. Middlebrook is also a director of the Beaver National Bank, honorary vice-president of the Lincoln University Endowment Association, and chairman of the Beloit Academy Endowment Association, and he was also chairman of the committee appointed by the American Civic Alliance to welcome former President Theodore Roosevelt. He has traveled extensively, having visited every state and territory of the United States, and the following foreign countries: Egypt, Greece, Italy, Germany, Switzerland, France, England, Scotland and Ireland, which he toured with Mrs. Middlebrook in 1909.

Mr. Middlebrook is an ardent advocate of physical exercise as a producer of good health and perfect manhood, and takes great pleasure in swimming, rowing, bowling, golf, hand-ball, tennis, automobiling and shooting, with both the rifle and the revolver. He has been the recipient of several medals and cups as rewards for his prowess in rifle shooting, revolver shooting, tennis and hand-ball.

He is a life member of the Peace Society, the American Civic Alliance, the Crescent Athletic Club of Brooklyn and the Pen Club; is a member of the American Geographical Society, the Touring Club of America and the United States Revolver Association. He was formerly a member of the Kenwood Country Club and the Knickerbocker Field Club. On November 3, 1891, he was married at Seattle, Washington, to Miss Charlotte Elizabeth Miller, who only a few months previously had completed her course at Wellesley College.

G. H. Middlebrook

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HENRY P. BOOTH.

Henry Prosper Booth

Henry Prosper Booth was born at New York City, July 19, 1836, the son of Alfred Booth, who for many years was prominent in the iron business in New York. The son obtained his early education in the local schools and then attended the Mechanics Institute in Chambers Street, where he received a thorough and practical training that perfectly equipped him for his future career. After leaving school he entered the employ of a firm of shipping merchants and thus began his lifelong alliance and identification with the commercial interests of the port of New York. Here for more than half a century he was actively engaged in the steamship and ship-brokerage business, and his name became well and most favorably known in shipping circles, not only in New York, but also throughout the world.

When still under 20 years of age, Mr. Booth joined with James E. Ward to form the ship-brokerage firm of James E. Ward & Company. In 1856 Mr. Booth and Mr. Ward conceived the idea of inaugurating a regular line of vessels between New York and Havana, Cuba, and the wonderful success of this venture induced them after a few years to substitute chartered steam vessels in place of the sailing vessels. In 1877 the firm of James E. Ward & Company placed an order with John Roach, the ship-builder, for the construction of two iron steamships, and these vessels soon demonstrated their vast superiority over the old type at that time largely employed by shipping merchants. The successful operation of these two vessels resulted in the extension of the service, and in 1880 Mr. Booth and Mr. Ward organized the New York and Cuba Mail Steamship Company, familiarly known as the Ward Line, to operate steamships between New York and various ports in Cuba and Mexico. Upon the death of Mr. Ward, in 1894, Mr. Booth became president of this company, and continued in that capacity almost up to the time of his death.

Under the able management of Mr. Booth the company gradually constructed larger and more efficient vessels and constantly added to its facilities in order to more easily and rapidly handle an ever-increasing volume of trade, with the result that the Ward Line now possesses one of the best equipped fleets of coastwise steamships in the world. The itinerary of the fleet was also much extended and the steamers now ply between New York and the Bahamas, Cuba and Mexico, touching numerous ports in Cuba and all of the gulf ports of Mexico. The majority of these ports have extensive railway connections and thus all parts of these countries are easily accessible. Beside the regular routes from New York there are also many short side routes in the Gulf of Mexico and the Caribbean Sea, the service in its entirety covering more than 10,000 miles.

The fleet of the Ward Line embraces a large number of ships of 4,000 tons or less and many of more than 5,000 tons, all of which are stanch and comfortable ships. They are of modern construction and full-powered, and were built especially for the service in which they are engaged. For travelers they offer large and well-furnished state-rooms, an excellent cuisine and all the other appointments that tend to make a sea-voyage enjoyable and luxurious. The facilities for handling freight have been equally well provided for. The steamers are equipped with the necessary appliances for transporting all varieties of heavy machinery and other merchandise and also with refrigerators for preserving fresh vegetables, meat and other perishable food products.

Mr. Booth's sphere of activity was not, however, confined to the management of the Ward Line, for he was connected with many other large enterprises, among which were the American Mail Steamship Company, the Brunswick Dock and City Improvement Company, the International Express Company, the New Niquero Sugar Company, the Federal Insurance Company, the United States and Porto Rico Navigation Company, the New York and Porto Rico Steamship Company, the Commercial Investing Company of Porto Rico, and the International Coal Company. But his chief interest was in the Ward Line and it has been aptly said of him that "the dominant feature of his busy [life] his devotion to shipping and commercial interests and the true and characteristic record of his life is found in the great commercial establishment of which he [was] the head and of which he [was] long the directing force."

While the business activities of Mr. Booth were extensive, and though his career was eminently successful, his kind and loving nature was not in the least warped or marred by any of the hard struggles incident to an energetic participation in industrial affairs. His ardent love of wife and friends and his innate passion for the comforts and companionships of a happy and beautiful home never lost their bright lustre nor became dimmed with advancing years, and, therefore, as his personal traits and habits were exemplary, his home life was perfect. Thus his private life was a fitting background for his daily life, and undoubtedly the supreme contentment and harmony pervading the atmosphere of his home were important contributing elements in the success attained by him in the outer world. He was especially fond of children and also of flowers, his particular favorites being tuberoses and carnations. Though five feet, nine inches in height, and at one time weighing 200 pounds, Mr. Booth was extremely fond of outdoor sports, his most usual pastimes being fishing and walking. He was a great lover of pure-bred dogs and always kept four or five of them constantly with him. Being accustomed to their company on his walks, he became warmly attached to them and they reciprocated this attachment, one of them grieving to death shortly after Mr. Booth passed away.

Mr. Booth was well known in the social circles of New York, and was a member of the Manhattan and Colonial clubs. He was also a member of the Board of Trade and Transportation. In 1867 he married Miss Angie M. Rowan. In January, 1909, Mr. Booth was taken ill and after a few days of sickness quietly passed away at his home in New York, January 16.

Edward Henry Harriman

Edward Henry Harriman was born at Hempstead, L. I., February 25, 1848, the fourth of the six children of Rev. Orlando Harriman, then rector of St. George's Protestant Episcopal Church of Hempstead. When Edward was hardly more than a year old his parents moved to Staten Island where they remained until 1859. In the latter year the father received a call to the rectorship of St. John's Church, West Hoboken, N. J., and there for several years the family struggled along on the meagre salary given by the church.

For two years the youth attended Trinity School in New York and this constituted the greater part of his schooling. His real education was obtained through experience in Wall Street and by constant private study. When 14 years of age he began his business life as a clerk in the office of a Wall Street broker, but by 1870, when only 22 years of age he had saved enough money to organize his own company and to buy a seat on the stock exchange.

The firm of E. H. Harriman and Company prospered, and Mr. Harriman now found time to interest himself in railroads. In 1883 he was elected a director of the Illinois Central, of which his uncle, Oliver Harriman, was also a director. He was soon promoted to the vice-presidency and then in the absence of the president, Stuyvesant Fish, to the acting presidency. Mr. Harriman had made a careful and detailed study of the science of railroading, and now applied his knowledge to the needs of his system, ordering the most modern and improved equipment and making elaborate changes in road-beds, terminals, signal systems, etc., so that by increasing his facilities he could more easily handle a larger volume of trade.

In 1898 Mr. Harriman began to develop his long cherished plan of uniting the two coasts by rail. In January of that year he joined a syndicate which purchased from the government the Union Pacific Railroad, 1,800 miles in length. He immediately started work upon large extensions of lines, bought large numbers of locomotives, freight and passenger cars, and expended immense sums of money in bringing his road up to the highest degree of efficiency —a project at that time considered suicidal. But Harriman foresaw the great wealth to be gained from the development of the West by the extension of railway lines and did not hesitate to pour millions into the furtherance of his ideas. And so ably did he bring his plans to maturity and so thoroughly had he mastered the intricacies of the business that old prejudices were forgotten and millions placed at his disposal for use as he thought proper.

In 1901 Mr. Harriman and his associates purchased the controlling interest in the Southern Pacific Railway. All his energies were now expended in developing these two properties, and his efforts were well rewarded by greatly increased earnings and larger dividends. But Harriman's policy forbade the paying of all this enormous increase to stockholders and instead he turned it back into his properties and also purchased, either in part or outright, other lines of railway.

This policy gradually brought an enormous mileage (about 25,000) under Mr. Harriman's absolute control, and also gave him vast influence in certain other lines (estimated at over 50,000 miles in length) in which either he personally or the Union Pacific held stock. In addition there were also various lines of steamships operated in connection with his roads, which comprised approximately 54,000 miles by sea. Beside this Mr. Harriman now assumed a commanding position in the money and stock markets, for with cash, stocks and bonds under his control to the value of nearly $650,000,000 he of necessity wielded enormous power. This power also brought him directorships in banks whose resources totaled nearly $400,000,000 and in various other institutions, a list of which would be too long to incorporate here, but which included such large corporations as the Wells-Fargo Express Company, the Colorado Fuel and Iron Company, the Western Union Telegraph Company, etc.

But Mr. Harriman's position had not been attained without some hard-fought struggles. His combinations and mergers brought him under the far-seeing eyes of the Interstate Commerce Commission who sought for violations of the national laws; and he also suffered many reverses because his competitors were constantly on the lookout for the means to block his ambitious plans. In 1901 James J. Hill, president of the Great Northern and the Northern Pacific roads, attempted to absorb the Burlington system. Mr. Harriman considered this a menace to the Union Pacific and immediately cornered the Northern Pacific stock then in the market, by so doing, causing a disastrous panic in May of that year. In January and February, 1907, the Interstate Commerce Commission began to investigate the affairs of the Union Pacific and its subsidiary corporations, particularly the Chicago and Alton, of which Mr. Harriman had control. It was claimed that there had been much watering of stock in connection with the reorganization of this road and Mr. Harriman did not attempt to deny it but justified the transaction by showing the enormous rise in valuations along the lines of the road and by pointing to the increased dividends. The Commission failed to obtain the information necessary to further prosecute its investigations, as Mr. Harriman refused to talk of transactions that he considered entirely of a personal nature. In this contention he was sustained by the Supreme Court and no further steps were taken in the matter.

While Mr. Harriman had little time for any matters not connected with his vast domain, still he was not too much occupied to contribute to worthy charities. His best known benefaction was the Boys' Club on the east side of New York, a new building for which he erected at a cost of $250,000. He also organized the Harriman Alaska Expedition of 1899 for the

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Fremont Cole

purpose of investigating and studying the geography, geology, glacial phenomena, and the flora and fauna of Alaska. The expedition was successful in every way and contributed much to our knowledge of that region.

Mr. Harriman was married to Miss Mary Averell, the daughter of a well-known financier, and five children were born to them—three daughters and two sons. In the early part of 1909 Mr. Harriman's health began to fail and he went to Europe for rest and recuperation but the disease from which he suffered slowly sapped his vitality and shortly after his return to his estate at Arden, Tuxedo Park, N. Y., he began to fail rapidly, finally succumbing to the malady on September 9.

Fremont Cole

Fremont Cole was born at Covert, Seneca County, New York, September 18, 1856, the son of Ira H. and Mary Caroline (Denison) Cole. His ancestors were among the earliest colonists in America, the names of the three brothers, Daniel, Job and John Cole, first appearing in the records of Plymouth Colony, Massachusetts, in 1633. Daniel, the first named, in 1650-51 went from Yarmouth, Mass., to Eastham, Cape Cod, and from them the line of descent is traced through their son William, who married Hannah Snow; their son Elisha, who married Anna ———; their son Elisha, Jr., who married Priscilla Smalley; their son Elisha, 3d, who married Charity Hazen; their son Daniel who married Sally Hopkins; their son Ira H., who married Mary Caroline Denison, and who was the father of Fremont Cole. The Coles have always borne their share of the country's burdens and several members of the family have taken part in our wars. Both Elisha Cole, Jr., and Elisha 3d, were soldiers in the patriot army during the Revolutionary War and Mr. Cole's grandfather, Daniel, fought throughout the War of 1812.

Fremont Cole received his early education in the Farmer Village Union School. In 1877, when 20 years of age he removed to Watkins, N. Y., and there began the study of law in the office of the surrogate of Schuyler County. In 1881 he was admitted to the bar and from that time until 1890 he practised his profession at Watkins. During this period he was elected to the New York assembly for five sucessive terms serving during the years 1885-89 and during the last two years of his service he occupied the position of speaker. In 1890, however, he removed to Seattle, Washington, where for the next five years he practised his profession, but in 1895 he determined to return east again and since that time has continued to reside in New York City. On September 20, 1888, he was married to Charlotte, daughter of Cyrus Roberts, of Watkins, N. Y., and to them has been born one daughter, Faith Cole.

Julius Kruttschnitt

Julius Kruttschnitt was born at New Orleans, La., July 30, 1854, the son of John and Penina (Benjamin) Kruttschnitt. His father was a native of Germany, who for some time represented his country as consul at New Orleans. Being a man of broad culture, he insisted upon the best possible education for his children, and the subject of this sketch, therefore, had the advantage of a thorough training before actually embarking upon his professional career. He entered Washington and Lee University at Lexington, Va., and was graduated C. E. in 1873. He engaged first in teaching, becoming assistant to Colonel William Allan, the principal of the MacDonough School, near Baltimore, Md. He left this position in 1878 to become resident engineer, in charge of construction, of Morgan's Louisiana and Texas Railroad. When the work of construction was finished he was made roadmaster of the western division in 1880 and a year later assistant chief engineer and general roadmaster. During the last two years of his connection with the road he was general engineer and superintendent, and at the termination of this connection in 1885 he became general manager of the Atlantic system of the Southern Pacific Railroad. This comprised all the lines east of El Paso, Texas, and during 1885-89 the entire division was operated under his supervision as general manager. At the end of that period his authority was extended over all the lines of the Southern Pacific with headquarters at San Francisco, Cal. In addition to his sound technical training, he was now equipped with a thorough practical experience and particularly a familiarity with the details of the entire system under his management. His election to the fourth vice-presidency on April 7, 1898, was therefore eminently appropriate and indicative of the policy of the railroad to place the corporate management of the system in the hands

of those who have made it their own—in an intellectual sense. In 1901 he was further advanced to be assistant to the president. In that year the Southern Pacific became a part of the great Union Pacific system and this vast combination offering a still wider scope for Mr. Kruttschnitt's abilities, they were soon utilized to the advantage of the entire system.

Julius Kruttschnitt

On April 1, 1904, he assumed charge, as director, of the maintenance and operation of the Union Pacific Company, the Oregon Short Line Railroad Company, the Oregon Railroad Navigation Company, and the Southern Pacific Company, making his headquarters at Chicago. He has held this responsible position to the present time having been connected with the system or one of its integral parts for more than a quarter of a century. The Southern Pacific was practically rebuilt under his direction, and the Union Pacific, with its subsidiary lines vastly improved and welded into one homogeneous while largely through his efforts. His brilliant achievements place him to-day in the front rank of successful railway executives, while his various industrial interests give him a similar eminence among the country's financiers. He is president of the Union Pacific Coal Company and a director of the Wells Fargo and Company express, the Illinois Tunnel Company, and other corporations. Mr. Kruttschnitt is a member of the International Railway Congress, and the American Railway Engineering and Maintenance of Way Association; a member of the Pacific Union Club of San Francisco; the Burlingame Club of Burlingame, California; the Boston Club of New Orleans; and the Union League and Glenview Country clubs of Chicago. He was married February 14, 1882, to E. Minna (Kock) of New Orleans, by whom he has four children.

Niels Poulson

Niels Poulson was born at Horsens, Denmark, February 27, 1843. He was educated at the Technical Institute at Copenhagen, Denmark, and immediately after graduation from this institution entered upon a business career. Before definitely determining upon the sphere in which he would actively pursue his labors he decided that the United States offered him a wider field than his native country for gaining the just reward of honest endeavor. At an early age therefore he came to this country and was soon industriously engaged in his chosen profession.

For two years he was a draftsman in the office of the supervising architect at Washington, but feeling that commercial life was better suited to him than the government service he resigned and for the next seven years he was connected with the Architectural Iron Works, of Brooklyn, N. Y., as head draftsman. Still he was not satisfied nor contented in the position of an employee, even though his remuneration was high and his employers greatly pleased with his work. In 1876, therefore, he determined to start in business for himself and persuading Mr. Eger to join him, he founded the firm of Poulson and Eger. Under Mr. Poulson's able management the business of the firm inside of a few years had grown to such an enormous extent that it was decided to change the firm to a corporation, and in 1897 Poulson and Eger was incorporated under the name of Hecla Iron Works, Mr. Poulson becoming president and director. Since that time Mr. Poulson's every effort has been directed toward building up and advancing the interests of his company, and the increasingly favorable annual reports of the business transacted bespeak eloquently of the wonderful success he has attained.

Mr. Poulson has a beautiful residence in the Bay Ridge section of Brooklyn and has always exhibited a praiseworthy public spirit in promoting the welfare of his community. He is a member of the Bay Ridge Citizens Association, the Brooklyn League, the Brooklyn Club and the Crescent Athletic Club; he belongs to the Manufacturers' Association; and is also secretary of the Architectural Iron Manufacturers' Association.

N. Poulson

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Bertram G. Work

Bertram G. Work was born on Staten Island, N. Y., January 9, 1868. His parents were Alanson Work and Etta W. Lane, and he was one of seven children: Clarence L., Frederick W., Gerald S., Mrs. Walter Wilcox, Mrs. W. C. Geer, and Miss Dorothy Work. He was educated at Williston Seminary and the Sheffield Scientific School of Yale University.

Mr. Work's father had for many years been engaged in the rubber manufacturing business and upon completing his education, he also selected this branch of industry as the one to which he was most inclined. At this time the rubber industry in this country was practically in its youth and it did not begin to assume the vast proportions which it has since attained until the later eighties. In the development and expansion of this industry, therefore, Mr. Work has been able to play an important and conspicuous part.

At the age of 19 years he entered the office of the B. F. Goodrich Company as corresponding clerk, for one year was in the bookkeeping department, and was then promoted to the position of assistant superintendent of the factory. In this capacity he displayed such earnest application to his duties and such ability that after two years he was appointed superintendent and held this latter position for 10 years. He was later raised to the vice-presidency of the company and in 1907 assumed the presidency.

While in the factory, Mr. Work learned all the details and intricacies of the entire rubber business and after becoming the official head of the company he did not allow himself to lose hold on the knowledge gained in his early career but has kept himself in close touch with all the practical operations of the industry, constantly seeking improvements in the methods of manufacture and always endeavoring to maintain the factories in the highest degree of efficiency so that the product would be of the most approved standard. Thus he is acknowledged by rubber experts to be in the foremost ranks of those engaged in this industry. The B. F. Goodrich Company, of which he is the president, operates the largest rubber manufacturing plant in the world and has increased its force of employees from 200 in 1888 to more than 5,000 in 1910, and its floor area from 67,000 square feet to 1,250,000 square feet. It manufactures every conceivable article that can be made from rubber and covers the field more thoroughly than any other company of its kind in the world, having branches in all the principal cities of the United States and in London and Paris.

In 1898 Mr. Work and Coburn Haskell jointly invented and patented the Haskell golf ball, which practically revolutionized the golf ball industry. The Goodrich Company is one of the manufacturers of the Haskell ball. In addition to the presidency of the Goodrich Company, he is also president of the B. F. Goodrich Company of New York, vice-president of the Haskell Golf Ball Company, vice-president of the Alkali Rubber Company, and vice-president of the Akron Rubber Shoe Company.

Mr. Work is an ardent and enthusiastic advocate of out-door sports and is particularly fond of golf, tennis, riding and shooting. He is a firm believer in traveling as a most beneficial and useful supplement to a purely educational training and has spent much time in widening his sphere of usefulness by extensive travels in Europe. He is also fond of study and has a well-selected library of the world's best literary productions. He is a member of the Merchants' Club of New York, of the Tavern and the Country clubs of Cleveland, the Chagrin Valley Hunt Club and La Boulie Golf Club of Paris, the Automobile Club of America, the Metropolitan Club of New York, and Portage Country Club. In 1890 he was married at New York to Marion Sawyer, daughter of E. Thomas Sawyer, and Mary E. Monserrat, and they have one son, Bertram (b. 1902).

Alton Brooks Parker

Alton Brooks Parker was born at Cortland, N. Y., May 14, 1852, the son of John Brooks and Harriet F. (Stratton) Parker, of New England ancestry dating back to colonial times on both sides. He was educated in the Cortland Academy and at the State Normal school in the same place. He engaged in teaching for three years and then entered the Albany Law School where he was graduated LL.B. in 1872. His legal training was supplemented in the office of Schoonmaker and Hardenburgh at Kingston, N. Y., where he engaged in the practice of his profession in partnership with W. S. Kenyon, Jr., directly upon his admission to the bar.

He was elected surrogate of Ulster County in 1877 on the Democratic ticket, a strong endorsement of his abilities in view of the fact that all of his running mates were defeated. In 1883 he was re-elected but resigned two years later to accept the appointment as judge of the state supreme court to succeed Theodoric R. Westbrook, deceased, tendered him by Governor David B. Hill. In the meantime he had been a delegate to the Democratic national convention, which nominated Grover

Cleveland for the Presidency and worked enthusiastically for his candidate's election. In 1885 his appointment to the supreme court was confirmed by popular election without opposition. When the second division of the state court of appeals was created in 1889, Judge Parker was appointed a member of that tribunal, and in the following year was assigned to the general term of the first department by Governor Flower. This assignment was repeated by Governor Black and he continued in the office until the new constitution in 1895 created appellate divisions.

The climax of his judicial career came in 1897 when he was elected chief justice of the court of appeals by a majority of 60,000 votes. He filled this, the highest judicial post in the state, with distinction and dignity, and many important decisions and opinions rendered by him remain in the legal records of the state as evidence of his wisdom. The distinguished services he had rendered his party and his able and honorable record on the bench placed him in the front rank of those amongst the conservative element most available for the highest honors. As that element was in the ascendency in 1904 it was not surprising that he should be chosen on the first ballot as the party's candidate for President in the ensuing convention. Before accepting the nomination he sent his famous «Gold Standard» telegram, which at once set at rest many doubts as to his position in that issue. It was generally considered to be an act of the highest courage inasmuch as it alienated a great part of the «radical wing» so powerful in the previous election. After a spirited campaign, which, though unsuccessful, served to rally many of the old line Democrats back to the party's standard, he resumed the practice of his profession as the senior member of the firm of Parker, Hatch and Sheehan in New York City, his partners being Hon. Edward W. Hatch, who resigned his seat on the state supreme bench to enter the firm, and ex-Lieutenant-Governor William F. Sheehan. The success which has attended the firm demonstrates the great value of his legal ability and has given an instance of the sacrifice involved in the devotion of such an ability to the public service. Perhaps one of his most notable achievements was his successful argument to prove the constitutionality of the eighty-cent gas law in 1908.

Judge Parker has continued to stand high in the councils of the Democratic party and the use of his name has been repeatedly sought for high honors. In 1906 he was elected president of the American Bar Association, an appointment which officially affirms his exalted position among his profession. The degree of LL.D. was conferred upon him in 1902 by Union College, of which institution he is honorary chancellor. He is the president of the New York County Lawyers' Association. Judge Parker was married in 1873 to Mary Louise, daughter of M. I. Schoonmaker, of Accord, N. Y., by whom he had two children: John, and Bertha, wife of Rev. Charles Mercer Hall.

William Sohier Bryant

William Sohier Bryant was born at Boston, Mass., May 15, 1861, third son of the late Henry Bryant, the well-known surgeon and ornithologist, and Elizabeth Brimmer (Sohier) Bryant. On the paternal side he is descended from Rollo through Baldwin de Brion, Earl of Chester, and through Elizabeth Wingfield of Letheringham from the nobility of mediæval England. On the maternal side he is a descendant of the d'Amery, de Lambert and Foster families; his mother's father was the lineal representative of the ancient Comtes de Vermandois, who were descended through the male line from Charlemagne. The first member of the Bryant family to arrive in America was William Bryant, who settled at Boston, about 1677. His great grandson, John Bryant, the great grandfather of William Sohier Bryant, served throughout the Revolutionary War, was invalided and subsequently placed in command of the Springfield arsenal. His son, John Bryant, during the opening years of the 19th century, founded the firm of Bryant & Sturges, in the East India trade, and was very successful. His son, Henry Bryant, father of William Sohier, was graduated from Harvard Medical School and the Sorbonne, at Paris; served as a member of the medical corps with the French army at Algiers; and upon his return to Boston joined Dr. Henry Jacob Bigelow in conducting the first free surgical dispensary in that city. In 1861 he was appointed first surgeon of the 20th Massachusetts infantry, and later became brigadier-surgeon of the United States volunteers, subsequently organizing the Clifton and Lincoln hospitals at Washington, D. C.

The early childhood of W. Sohier Bryant was passed partly at Boston and Cohasset, Mass., and partly in traveling in America and Europe. His preliminary education was obtained at St. Paul's School, Concord, N. H.; in 1884 he was graduated from Harvard University, in the same year entering Harvard Medical School, whence he was graduated in 1888, with the degree of M. D., at the same time receiving the degree of A. M. for original anatomical work. He began his professional career at Boston, in 1888 becoming aural surgeon at the Boston Dispensary and aural externe at the Massachusetts Charitable Eye and Ear Infirmary at Boston. In 1890 he became clinical assistant at the latter institution and in 1892 aural clinical assistant, and from 1894 to 1897 was assistant aural surgeon, in the latter year severing his connection with both the above institutions. He was the first to give post-graduate instruction in otology at the Harvard Medical School; from 1893 to 1896 was assistant in otology there, and from 1890 to 1903 was also assistant in anatomy.

Dr. Bryant had for 15 years been connected with the national guard of Massachusetts and upon the outbreak of the Spanish-American War, in 1898, he was commissioned by Governor Roger Wolcott first lieutenant and assistant surgeon in the 1st Massachusetts Heavy Artillery. In the following July he was commissioned by President McKinley major and brigadier-surgeon of volunteers, in which capacity he served with the 7th Army Corps under General Fitzhugh Lee at Jacksonville, Fla., Savannah, Ga., and Havana, Cuba, and filled various medical positions up to that of chief surgeon of the United States forces at Savannah. During his service in the army, which came to a close in 1899, Dr. Bryant had been greatly interested in the regulation of the sanitary conditions of the various camps at which he was stationed and especially in the prevention of typhoid fever, he being the first to attribute the spread of that disease to the agency of flies. He also attained splendid results in the prevention and cure of cerebro-spinal meningitis.

From 1903 to 1904 Dr. Bryant was clinical assistant in the department of otology in the Vanderbilt Clinic, New York; from 1903 to 1905 was instructor in otology at the College of Physicians and Surgeons, New York; during the same years was clinical assistant in the New York Eye and Ear Infirmary, where he was also assistant surgeon 1905-1908; from 1904 to 1905 was assistant surgeon in St. Bartholomew's Clinic, New York; from 1904 to 1906 was clinical instructor and attending surgeon in the otological department of the Cornell University Medical School, New York; from 1905 to 1908 was physician in class of nose, ear and throat diseases at the Presbyterian Hospital, New York; from 1906 to 1908 was adjunct professor in the department of diseases of the ear in the New York Post-Graduate Medical School and Hospital; and since 1906 has been consulting otologist to the Manhattan State Hospital, New York, and since 1908 senior assistant surgeon to the aural department of the New York Eye and Ear Infirmary.

His practice allows Dr. Bryant but little time for relaxation and the time he can spare from his professional work is devoted to scientific research and histology. He is a prolific writer and has contributed to medical literature nearly 200 articles on original work in anatomy, physiology and therapeutics. He is also the author in conjunction with Dr. Charles H. Knight, of 'Diseases of the Nose, Throat and Ear' (1909). In connection with his profession Dr. Bryant is a member of many societies, among which are the American Otological Society; the American Academy of Ophthalmology and Oto-Laryngology; the American Laryngological, Rhinological and Otological Society; the New York Otological Society; the American Medical Association; the New York State Medical Association; the New York County Medical Association; the New York Academy of Medicine; the Manhattan Medical Association; the Massachusetts Medical Society; the Medical Association of the Greater City of New York; the Clinical Society of the Presbyterian Hospital; the American Association for Sanitary and Moral Prophylaxis; the Association of Military Surgeons of the United States; the New York Physicians' Mutual Aid Association; and the Boston Society of Natural History.

Dr. Bryant has traveled extensively in North America and Europe. From earliest boyhood he has been a great lover of nature, taking an especial interest in zoology, particularly ornithology, and he has made some large and valuable collections. He is fond of every form of out-door life, and is much interested in athletics, especially rowing, while in his senior year at Harvard University having been a member of the 'varsity crew. He is a member of the Massachusetts Society of the Cincinnati, the Society of Mayflower Descendants, the Huguenot Society of America, the New England Society of New York, the Society of Colonial Wars, Sons of the Revolution, Sons of Veterans, Loyal Legion, Military Order of Foreign Wars; Naval and Military Order of the Spanish-American War, Spanish War Veterans, the Harvard Club of New York, the Porcellian Club and the Delta Kappa Epsilon and Zeta Psi fraternities. He is also a Knight Templar and a 32d degree Mason, and a member of the Mecca Temple and of Holland Lodge No. 8. On September 1, 1887, he was married at Orange, N. J., to Martha Lyman Cox, daughter of James Sitgreaves and Mary (Hazard) Cox; and to them have been born six children: Mary Cleveland (b. June 6, 1888), Elizabeth Sohier (b. July 13, 1890), Alice de Vermandois (b. May 15, 1892), Julia Cox (b. June 25, 1893), Gladys de Brion (b. December 12, 1894), and William Sohier, Jr. (b. December 8, 1896).

William Ellis Corey

William Ellis Corey was born at Braddock, Pa., May 4, 1866. His father, Alfred A. Corey, was for many years a prominent coal merchant and was descended from Benjamin Corey, who owned a farm of about 300 acres, now within the limits of New York City, and which he developed after many years of patient toil into a prosperous and financially successful property. Mr. Corey's mother was Adeline (Fritzius) Corey.

Mr. Corey received his early educational training in the public schools of his native city, later supplementing this with a course at Duff's Business College, at Pittsburg, Pa. With the exception of a short course at night school this constituted the only schooling the youth was destined to secure in institutions of a purely educational nature, and that he absorbed and retained every particle of knowledge imparted by his teachers is amply proven by his later

career. His rise to the foremost ranks of great American industrial leaders and capitalists is a glowing testimonial for the solid and substantial manner in which he laid the foundations of that career in his early days at school.

In 1882, when only 16 years of age, and with little else, therefore, than an ardent desire to accomplish large things, an indomitable will and an unconquerable tenacity of purpose, Mr. Corey embarked into business life, taking a position in the chemical laboratory of the Edgar Thomson Steel Works. Here was presented to the young man a large field for the exercise of his talent and ability. A wide range of opportunities lay before him, for at this time Andrew Carnegie and Captain William Jones were exerting their combined efforts toward the producing of steel at a pace which was the astonishment and marvel of the entire manufacturing world. Mr. Corey's energy and tenacity consequently stood him in good stead in his new position and he soon became recognized as one of the most conspicuous members of a group of young men, who, under the leadership and tutelage of Mr. Carnegie, subsequently brought the manufacture of steel up to its present high standard and who organized, systematized and developed the industry to such a high degree of proficiency and perfection that the United States is now far in the lead among the nations engaged in the manufacture of that article.

The young man quickly perceived the almost unlimited possibilities of the infant industry and with marvelous intuition determined to advance with equal rapidity into that bright future behind the veil of which, like so few others, he had been able to see. In order, therefore, that the industry might not find his footsteps lagging and that he might keep abreast of its growth he bent all his energies to the cultivation and training of his mental faculties by attending night school while working during the day on a coal tipple. It was small wonder then that the perseverance and zeal of the youth attracted the notice of his superiors and that he was rapidly promoted from one position to another. He became a weighmaster in 1884 and two years later entered the business office of the company as a clerk, serving in that capacity until April, 1887, when he left the employ of the Edgar Thomson Steel Works to accept a position in the open hearth department of the Homestead Steel Works. He was promoted to the superintendency of the plate mill in 1889; in February, 1893, became superintendent of the armor plate department; and four years later, in 1897, he succeeded Charles M. Schwab as general superintendent of the works. About the same time also he became a partner in the Carnegie Steel Company, Limited, and shortly afterward added the duties and responsibilities of the position of superintendent of the Carrie Furnaces and the Howard Axle Works. He thus became a director of the largest groups of iron and steel manufacturing plants in the world and numbered among his thousands of employees some of the world's most skilled artisans and operatives in that branch of industry. While at Homestead he invented the Carnegie reforged armor plate.

Mr. Corey has often said that "the man who succeeds is the man with bulldog tenacity—who never gives up. He is the man who does not only what he is told but more." These words could not be more aptly applied to the career of any man than to that of Mr. Corey himself, for in every position which he has held and in every task to which he has applied himself he has employed the utmost diligence, faithfulness and efficiency, sparing neither time nor effort that the performance might far exceed the requirements. It was undoubtedly this trait of his nature, together with the fact that the multiplicity of interests and responsibilities placed upon his shoulders only tended to develop greater energy and ability, that, as time passed on, brought him still larger responsibilities and demonstrated that the confidence and trust reposed in him by Mr. Carnegie and others had not in the slightest degree been unwarranted or misplaced. The high esteem in which he was held was indicated on April 1, 1901, when he was elected president of the Carnegie Steel Company, the National Steel Company, and the American Steel Hoop Company. On August 1, 1903, as a further mark of appreciation for faithful service, he was elected the second president of the United States Steel Corporation, succeeding in this position his lifelong friend and companion, Charles M. Schwab.

As president of the United States Steel Corporation Mr. Corey showed himself to his associates to be a remarkable example of the reserved, self-contained and cautious business man of many interests and wide experience. Supplementing his methodical, indefatigable and painstaking work by thoroughness of organization, exact and severe supervision and scientific mastery of the minutest details, Mr. Corey wove and welded the innumerable and almost incalculable intricacies and the many delicate thread-like branches that constitute the iron and steel industry into one vast machine that operates as swiftly, surely, perfectly and inexorably as is possible under human agency. The results of his work can best be shown by a glance at the operations of the corporation after he became president. Its employees numbered about 150,000 in 1903 but since that time more than 75,000 names have been added to its payrolls; and more than $12,000,000 in bonuses, premiums and dividends on shares of stock held by them have been paid. The annual payroll of the corporation has risen from $130,000,000 to more than $175,000,000; and since 1903 more than a billion dollars have been paid to capital and labor, of which approximately 75 per cent. have been paid to labor. Mr. Corey by his policies effected an increase of over 50 per cent. in the productive capacity of the plants operated by the corporation and also decreased the cost of production by 10 per cent. The corporation now owns about 125 blast furnaces, which turn out nearly half of the pig iron produced in this country, 150 or more works, 50 mines, 1,000 miles of main line railroad, 1,000 locomotives, 50,000 freight cars, 18 docks for the shipment of its products, 105 ore ships, and more than 20 per cent. of the world's known supply of iron ore. The stock and bond capitalization of the corporation is about $1,500,000,000.

During Mr. Corey's presidency several important events connected with the expansion of the corporation took place. One of these was

W E Corey

the completion of the «steel city» of Gary, Indiana, where the corporation erected one of the largest, if not the largest, steel plants in the world. The corporation first purchased a tract of 8,000 acres, or 12½ square miles, of territory with a frontage of nearly eight miles on Lake Michigan, and developed this into a city of more than 10,000 inhabitants. In addition to its steel plant, its long concrete docks, artificial slip 25 feet deep and 750 feet wide, its wonderful terminals and switching districts for railroads, its wide asphalt streets and concrete sidewalks, the city has banks, daily and weekly newspapers, an excellent street railway, a hotel and a commercial club. For the exclusive use of its employees the steel corporation erected nearly 800 roomy, comfortable and healthful houses which it intended that the employees might purchase if they so desired. The money invested by the corporation at Gary amounts to more than $100,000,000.

Another event of prime importance was the acquisition of the properties controlled by the Tennessee Iron and Steel Company. This was followed shortly afterward by the purchase of the iron ore properties controlled by James J. Hill and the Great Northern Railway Company. These additions enabled the corporation to produce more steel than England or Germany. But while the corporation was growing to such enormous proportions, it was likewise pursuing a most far-sighted policy in cultivating the trust and friendship of its employees—a policy which perhaps more than any other single thing has tended to do away with an industrial problem. This policy consisted of inviting its employees to become shareholders in the corporation by the purchase of its stock on most favorable terms. Under this broad gauge system of profit sharing nearly 50,000 employees have invested in the stock and have thus become partners in undoubtedly the largest coöperative enterprise in the world.

Under Mr. Corey's leadership and direction the corporation also did much toward establishing confidence in business conditions and thus became a powerful factor in modern industrial life. It aimed to give stability to prices not only by maintaining one standard of price and quality for all customers alike but also by the cultivation of friendly relations with all its competitors. In addition the corporation adopted the policy of giving publicity to all transactions by publishing throughout the country its regular official reports disclosing its operations, profits, financial conditions, etc. In 1911 Mr. Corey resigned the presidency.

He is a director of the American Mining Company, the American Sheet and Tin Plate Company, the American Steel and Wire Company of New Jersey, Carnegie Phipps and Company, Limited, the Carnegie Steel Company, the Carnegie Steel Company, Limited, the Carnegie Steel Company of Pennsylvania, the Clairton Steel Company, the Edgar Zinc Company, the Federal Steel Company, the H. C. Frick Coke Company, the Illinois Steel Company, the Minnesota Iron Company, the Minnesota Steel Company, the National Tube Company, the National Tube Works Company, the Sharon Tin Plate Company, the Shelby Steel Tube Company, the Tennessee Coal, Iron and Railroad Company, the Troy Steel Products Export Company, the United States Coal and Coke Company, the United States Steel Products Export Company. He is also a director of the following transportation lines: Birmingham Southern Railway Company, Chicago, Lake Shore and Eastern Railway Company, Connellsville and Monongahela Railway Company, Duluth and Iron Range Railroad Company, Elgin, Joliet and Eastern Railway Company, Pittsburg Steamship Company, and the Youghiogheny Northern Railway Company, and also of the Gary Land Company, the Mount Pleasant Water Company, and the Trotter Water Company.

In private life Mr. Corey is entirely unpretentious. He is an ardent advocate of outdoor sports, particularly football and baseball, and he is especially fond of horseback riding. He is a member of the Ardsley Club, the Metropolitan Club of New York, the Automobile Club of America, the Duquesne Club of Pittsburg, and the Metropolitan Club of Washington. He is also a member of the British Iron and Steel Institute, the American Institute of Mining Engineers and a director of the American Iron and Steel Institute.

David Leventritt

David Leventritt, jurist, was born at Winnsboro, S. C., January 31, 1845, the son of George M. and Betty (Goldberg) Leventritt. His father, a native of Germany, settled in South Carolina, as a merchant in 1834. He removed to New York City with his family when David was nine years of age and the latter was educated in public and private schools of that city. He attended the New York Free Academy (now the College of the City of New York), where he was graduated A. B. with honors in 1864, being the salutatorian of his class and winning medals in mathematics and Greek. His legal training was acquired in the New York University Law School, which gave him the degree of LL.B. in 1872. Admitted to the bar in the same year, he at once entered upon the practice of his profession in New York, forming a partnership with Harold Nathan and earning a reputation as one of the best speakers at the bar in the city. The municipality retained him as counsel in important cases, while his private practice grew large and lucrative. Between the time of his admission and his election to the supreme bench, a period of 26 years, he probably handled more trial

cases than any other lawyer in the metropolis, either as attorney of record or as counsel for other lawyers who sought his advice. An important case in which he served the city was the condemnation of the lands which now constitute Washington Park, situated along the Harlem River between High Bridge and Washington Bridge. The owners' claims of over $1,300,000 were reduced by more than one-half through Mr. Leventritt's efforts. A similar matter concerning the approaches to the Harlem Bridge came under his jurisdiction during 1894-96, as chairman of a committee appointed by the supreme court to appraise the value of the property which had to be condemned. Many conflicting legal questions with reference to riparian right, public grants and the dedication of lands for public schools had to be determined and while in most cases his awards were made acceptable to the property holders the remainder was affirmed by the courts upon appeal.

David Leventritt

A member of the Democratic party, he became its candidate for justice of the New York supreme court, first district, in 1898, and was elected for a term of 14 years. He filled that office with distinguished ability, recommending himself to the bar and the community as a man of the highest judgment and conscientious impartiality, especially in cases involving questions of equity. Many of the most important of such cases came before him during his term of service and his decisions stand as models of judicial sagacity. On May 1, 1908, Judge Leventritt resigned his seat in order to resume the practice of law. Before his retirement from the bench the Association of the Bar adopted a resolution highly commending the judicial services for which the city was indebted to him.

As senior member of the firm of Leventritt, Cook and Nathan, his counsel is now being sought by both private and corporate clients, chiefly in civil cases of importance. His firm is, indeed, among the most influential in New York, having absorbed those of Wallach and Cook and Nathan, Leventritt and Perham. Among the other members of this combination are his former partner Harold Nathan, Edgar M. Leventritt, a nephew, and Emil Goldmark.

Judge Leventritt is keenly interested in charitable and benevolent organizations, being a director of Mount Sinai Hospital, Lebanon Hospital, the Hebrew Asylum, the Montefiore Home, the Hebrew Technical Institute, the Home for the Aged and Infirm, the Educational Alliance, the Guild for Crippled Children, and the Young Men's Hebrew Benevolent Association, all of New York. He is a trustee of the Temple Emmanuel, a member of the order of B'nai Brith, and vice-president of the Alumni Association of the New York University Law School; a member of the American International Law Society, the National Geographic Society, the Democratic and Sagamore clubs, of New York. He was married June 9, 1868, to Matilda, daughter of Leopold Lithauer, of Hartford, Conn., and has three children, Olivia, Walter R., and Leopold L. Leventritt.

Hugh Chalmers

Hugh Chalmers was born at Dayton, Ohio, October 3, 1873, one of the seven children of Thomas and Jeanette Bell Chalmers. He received his education in the public schools of Dayton, but left school at an early age to help support a large family. His work, however, did not deter the youth in his pursuit of a higher education, as he went to night school for four years, studying English, stenography and bookkeeping.

His first position was that of office boy with the National Cash Register Company, in whose employ he entered in 1888, when a few months over 14 years of age. This position carried with it a remuneration of $2 per week, but even this sum loomed big in the eyes of the boy. But he was possessed of three sterling qualities —good judgment, initiative and an enormous capacity for work—and it was not long before he had been promoted to a higher position with [illegible]ed salary. He then became sten[illegible] subsequently a bookkeeper, and when about 20 years of age was given his first chance to enter the field as a salesman.

In order that he might prove his calibre, the young salesman was sent out to secure orders in the home territory—the most difficult territory that could be found. The manager of the sales department did not expect that he could secure many orders as the territory had been thoroughly canvassed by nearly every salesman started out by the company since its organization. It was thought that during his initiation he might secure an order here and there that his predecessors had overlooked or from some new business house that had sprung up since the territory had last been worked. A pleasant and wholly unforeseen surprise was in store for his superiors, however, for the young salesman turned in more orders in one month than any other salesman in any territory. His success lay in the fact that he realized that these merchants had been approached on the same basis and in the same manner for many years and

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had heard the same talk so often that they knew it and how to evade it. Chalmers originated an entirely new method of attack and a new canvass. He studied the needs and requirements of each particular case before approaching the prospective purchaser, and thus was able to talk in an intelligent manner before entering the merchant's place of business.

Thereafter his success was assured, and in a short time Mr. Chalmers rose to the position of manager of agencies. In 1902, at the age of 29 years, he became vice-president and general manager of the company, and before a period of four years had elapsed he was drawing an annual salary of $72,000, which in 1907 was increased to $84,000. But he decided that he wanted to build a business and a reputation under his own name and after having served the National Cash Register Company for 19½ years, he resigned to engage in business for himself. He then purchased an interest in the E. R. Thomas Detroit Company, makers of motor cars, and the name of the company was changed to Chalmers-Detroit, and exercising his three predominant qualities—judgment, initiative and work—he proceeded to expand the business, within a year selling more than 3,000 cars. This success earned a swift reward and in a short time the name of the company was changed to the Chalmers Motor Company, Mr. Chalmers having become the chief factor in its affairs.

Mr. Chalmers has traveled in every part of the United States and has been abroad many times. His principal recreations are golfing, automobiling, horseback riding, fishing and hunting. He is also fond of social life, and is a member of many clubs, among which are the following: all Masonic bodies, including Consistory Degrees at Dayton and Cincinnati; the Dayton Club; the Detroit, Country, Automobile, and Adcraft clubs of Detroit; the Ohio Society of Detroit; the Detroit Board of Commerce; the Sphinx Club; the Pen Club of New York; and the Poor Richard Club of Philadelphia. On August 22, 1901, he was married at Dayton, Ohio, to Frances Houser, and to them have been born four children: Helen (b. October 19, 1902), Hugh (b. May 4, 1904), Frances (b. August 29, 1906; deceased August 1, 1909), and Bruce (b. December 28, 1908).

John Haughten Smitley

John Haughten Smitley was born at Pittsburg, Pa., February 22, 1846, one of the ten children of John and Keziah Whitmore Smitley. On the paternal side he is descended from an old Swiss family, the first representative of which to arrive in America was Jacob Smitley, who came here about 1780. On the maternal side the family were natives of Lancaster Pa., and both his father and mother were born and raised in Westmoreland County, near Greensburg. Both families espoused the cause of the colonies in their struggle against oppression by Great Britain, and the grandfathers of both Mr. Smitley's father and mother fought in the patriot army during the Revolutionary War. His father was a prominent and successful coal merchant in Pittsburg in 1838 and was one of the pioneers of the trade, his works being located in what is now the 36th Ward in the West End. During the Civil War he acted as an oil inspector for the government.

The young man received his elementary education in the public schools of his native city, then entered the Thaddeus Stevens School in the West End and later supplemented this by a commercial course at the Jenkins and Smith Iron City Business College, Pittsburg, completing his studies in 1862. Shortly afterward he entered business life, beginning his career as cash receiver at the Penn Avenue office of the Citizens' Passenger Railway Company, to which position, though only 16 years of age, he had been appointed by the late James Verner, at that time president of the company. He creditably acquitted himself of his duties during the four years that he remained in the position, but in 1866 he saw an opportunity to better himself and accepted the position of shipping clerk for the Pittsburg Forge and Iron Company, in which capacity he continued to serve the company most satisfactorily until 1870.

On July 7 of that year Mr. Smitley made a business connection which was subsequently to prove the turning point in his highway to success, and from the small beginning of which he later raised himself by close application to his duties, absolute honesty, and ability to master details to the highest office at the disposal of the company. He entered the employ of the firm of Reymer and Brothers, now one of the largest and best-known confectionery manufacturing concerns in the world, at first taking the position of shipping clerk at $40 per month. During the next 12 years he assiduously worked for the interest of his employers, exhibiting a wonderful capacity for hard work and demonstrating to his superiors marked ability in his management of the affairs entrusted to him. His faithful work brought its reward in rapid advancement in position and salary until finally, in 1882, his services had become so well-nigh indispensable that he was admitted into the firm as a partner and since that time has been its guiding spirit.

In 1892, ten years after Mr. Smitley became a partner, Mr. Philip Reymer died, to be followed in 1902 by his brother Jacob S. Reymer, In 1901, however, before the death of the latter, Mr. Smitley decided that the interests of all would be better conserved if the partnership should be changed into a corporation, and in that year he and his business associate, Mr. B. Dangerfield, together with some of the employees of the company, formed the corpora-

tion of Reymer and Brothers, incorporated, with Mr. Smitley as president, Mr. Dangerfield as secretary and treasurer, Mr. Frederick P. Smitley as vice-president and manager, and Mr. B. Dangerfield, Jr., and Harry Dangerfield as directors. The old partnership had acquired an enviable reputation as a solid, substantial manufacturing concern, gained through long years of strict business integrity and honor, and therefore the new corporation began its career most auspiciously, but while this reputation has been largely influential in bringing success to the company, the greatest part of its increased trade is due to the sound and progressive policies instituted by Mr. Smitley, which have resulted in extending the business throughout the United States and even to foreign countries.

During his entire business career Mr. Smitley has endeavored in every conceivable way to advance the interests of his employees, both male and female. Being a keen judge of the capabilities of an employee he has gathered around him a band of able workers who are not only faithful to their duties but loyal to him personally, many of them having been brought up in the business. This attachment he has reciprocated by numerous acts of kindness, such as the sending of several to night school, he paying the cost of the tuition, and he has also instituted a system of pensioning employees for life after 25 years of service. Being thus in close contact with his hundreds of employees Mr. Smitley is very popular among them and much beloved, chiefly because his acts have been prompted by a generous nature and a warm heart rather than by mercenary business policy.

Mr. Smitley is interested in many other enterprises and is also a director in the Commonwealth Trust Company and the Commercial National Bank, two of Pittsburg's representative financial institutions. He has been a member of the Allegheny City Council, is a member of the Masonic Fraternity and the Mystic Shrine, an honorary member of Col. J. B. Clark Post, No. 162, G. A. R., a life member of the United States Navy League Association of Washington, D. C., and a member of the Duquesne Club. On October 1, 1867, he was married to Miss Elizabeth Porter, daughter of William P. Porter (who was manager of the Pittsburg Forge and Iron Company) and of Mary Foster Porter, and they have one son, Frederick P. Smitley, now vice-president of the company to which his father has given the most valuable years of his long and honorable career.

Arthur S. Huey

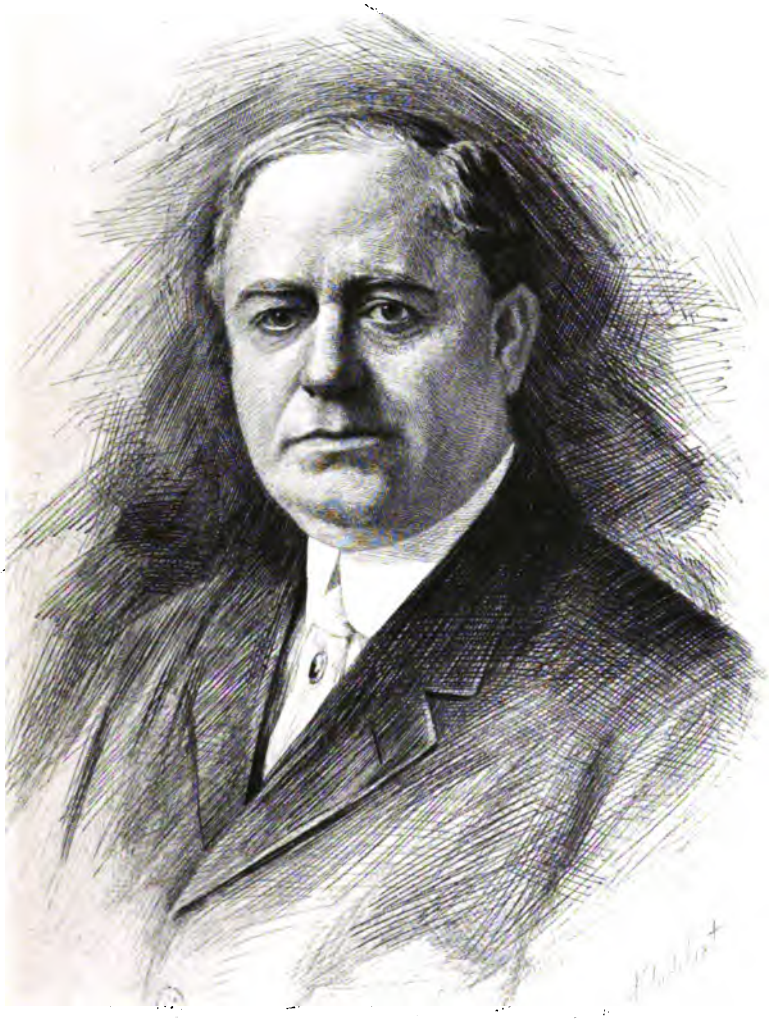
Arthur S. Huey was born at Minneapolis, Minn., August 17, 1862, the son of George E. and Corolin Taylor Huey. He is one of a family of six children, having four brothers—George T., Frank, Albert and Douglas—and one sister—Mary. He is descended from Dutch and Scotch-Irish ancestry.

His father was one of the early pioneers of the northwestern states. In the primeval nature of the country in which he settled he saw that before other industries could make much progress, the natural resources of the community must be developed and he therefore engaged in lumbering, flour milling and mining, being the first to grind flour and the first to saw lumber by power derived from St. Anthony's falls at Minneapolis. He was one of the first to realize the great natural wealth of the famous old Sioux reservation—the Black Hills region of South Dakota—and he took a prominent part in its development. He was also largely instrumental in the founding and later development of the city of Great Falls, Montana.

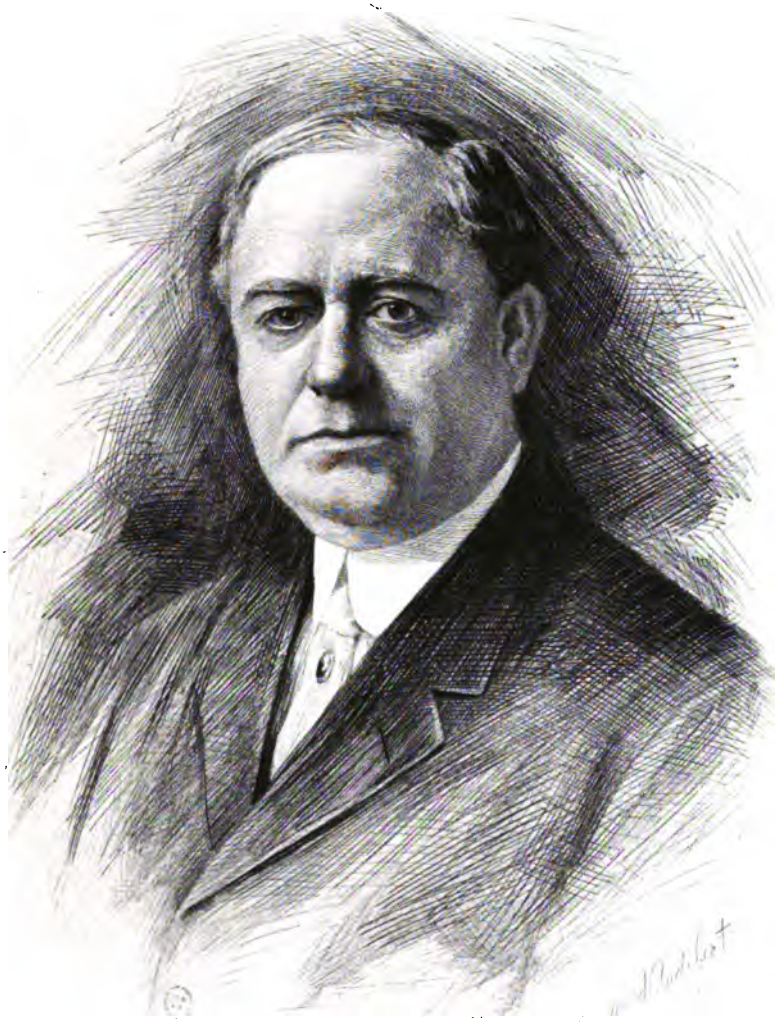
His son Arthur received his education in the public schools of Minneapolis and in order to enter business life decided not to undertake an advanced course of study in a university. His eagerness to learn a trade and enter upon some lucrative employment is evidenced by the fact that while still attending public school he learned the trade of a journeyman printer and has never since regretted it. At an early age, therefore, he entered upon a business career that was destined to be a sucess. For several years he represented the Edison Electric Company and its successors and during his connection with these interests displayed remarkable faculties for handling and solving intricate business problems.

In 1902 his reputation for executive ability and exceptional business acumen led to his becoming associated as vice-president with the engineering firm of H. M. Byllesby and Company, of Chicago, which has charge of the operation and management of public utilities in 82 municipalities of this country ranging in population from 215,000 down. Mr. Huey is in charge of the department of management and operation of affiliated public utility companies, and because of his success in his undertakings, his ingenious methods and his broad view of the obligations to the public of utility corporations he has come to be recognized as one of the most progressive among the leading operators of street railway, electric light and power, and gas utilities. His stand on the question of the relation of utility corporations to the public has resulted in bringing the public into more friendly attitude toward such corporations, for he believes that the management and operation of a public utility is a trusteeship of a high order, the responsibility for which can neither be denied nor ignored and that every exertion must be put forth to render the most efficient service at reasonable cost.

Mr. Huey is connected with a large number of corporations in various capacities. He is president of the Ottumwa Railway and Light Company, of Ottumwa, Iowa, the El Reno Gas and Electric Company, of El Reno, Oklahoma, the Fort Smith Light and Traction Company,



Arthur S. Huey.



Arthur S. Huey.

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of Fort Smith, Arkansas, the Consumers Power Company of Minnesota, the Interstate Light and Power Company of Galena, Illinois, and the Northwestern Corporation, of Oregon; he is vice-president of the Mobile Electric Company, of Mobile, Alabama; the Oklahoma Gas and Electric Company of Oklahoma, the Northern Idaho and Montana Power Company, and the Muskogee Gas and Electric Company, of Muskogee, Oklahoma; he is secretary of the Northern Electric Company, secretary of the Pend 'Orielle Electric Company, and trustee of the Northwestern Corporation and the Northern Electric Company.

Though his business obligations are heavy Mr. Huéy has found time to make a number of notable addresses before representative national gatherings in advocacy of greater liberality and progressiveness in the methods of conducting the operations of public utility corporations. He has also indulged himself in his favorite recreations of fishing and traveling, and is familiar with all parts of the United States, Canada and Mexico. He is a member of the Episcopal Church, of St. John's Commandery and Zurah Temple, Minneapolis and of the Union League and Midday clubs of Chicago and of the Lawyers' and Railroad clubs of New York. On September 22, 1886, he was married at Minneapolis to Hattie King, daughter of George S. and Harriet Reid King and to them have been born three children: Howard Albert (b. September 29, 1887), Richard King (b. August 31, 1893), and Ruth (b. October 19, 1897).

William Henry Canniff

William Henry Canniff was born at Litchfield, Mich., October 22, 1847, the only one surviving of the five children of Lewis Baldwin Canniff and Matilda Esther Hatch. His father was engaged in railroading, and the son, after obtaining a common school education, followed in his father's footsteps, in 1864, at the age of 17 years, entering the employ of the Michigan Southern and Northern Indiana Railroad as night watchman.

Having decided to follow the science of railroading, Mr. Canniff devoted himself with energy to the study of every little detail of the entire business. At the same time he applied himself diligently to the tasks connected with each position to which he was advanced, and had mastered all the intricacies of each new position before he aspired to another. In this way he learned his profession from the bottom up, and in addition had gained a vast amount of knowledge that could only come from practical experience. So that when he finally reached the top round of the ladder, he not only brought to his office the ability of a financier, remarkable capabilities as an organizer and an intimate knowledge of the road of which he was the head, but also because of his long experience he was as capable of filling the office of track master, division superintendent or station agent as he was of the office of president. He was therefore the practical as well as the official head of his company.

Mr. Canniff worked industriously and tirelessly in all the positions he held, and his earnest application and judicious methods of handling the various problems presented to him earned him the recognition of and promotion by his superiors. From March, 1865, to August, 1868, he was station agent at Trenton, Mich., at the latter time being transferred to Salem Crossing, Ind., as joint station agent of the Lake Shore and Michigan Southern Railway and the Louisville, New Albany and Chicago Railway. In this position he remained four years—until 1872. From August 1872, to December, 1879, he was track master of the Kendallville division of the Lake Shore and Michigan Southern Railway Company; from December, 1879, to November, 1880, he held the same position with the Chicago division of the road; and from November, 1880, to November, 1889, was division superintendent of the Lansing division.

Having now occupied the most important minor positions in the service of the company, and having gained a thorough knowledge of the inner workings of the whole system, Mr. Canniff was appointed in November, 1889, to the position of assistant general superintendent of the entire Lake Shore and Michigan Southern Railway, which position he continued to occupy until January 1, 1892, when he was promoted to the office of general superintendent. After four years of service in this capacity (until March, 1896) he was made general manager of the road, remaining such until May, 1898. In May, 1898, he was elected president of the New York, Chicago and St. Louis Railroad, and has held that office ever since, managing the affairs of the latter company with the same ability that characterized his career throughout his entire course of apprenticeship.

Mr. Canniff has traveled over a considerable portion of America, preferring to see all parts of his own country before visiting foreign lands, and he has therefore confined his travels chiefly to various parts of the United States, Mexico and the Maritime Provinces. He enjoys social life, and is a member of the Chicago Club, of Chicago, and the Union, Country, Roadside and Clifton clubs, of Cleveland. He is also a member of the chamber of commerce, of Cleveland. He is fond of good, substantial reading, particularly of books relating to scientific, political and historical subjects, and of such works his library contains a well-selected list, which immediately betray to the observer the fact that he has considered a broad knowledge of almost as much importance in his position as a knowledge of railway engineering or at least as a necessary adjunct to his equipment for business life. His wife, Ella Viola Canniff, was a daughter of Silas and Jemima Oviatt.

Joseph Ingersoll Doran

Joseph Ingersoll Doran was born at Philadelphia, Pa., January 17, 1844, the son of former Judge Joseph Michael and Ann Luker (Callahan) Doran, and a grandson of Michael Doran, a merchant, who came to this country in 1795 and settled at Philadelphia. His father was an eminent lawyer who from 1840 to 1843 was a judge of the court of general sessions.

The young man's early education was obtained in private schools and he was then prepared for college by John W. Faires. After a short course in the University of Pennsylvania he became a law student in the office of Hon. John C. Bullitt and in 1865 was admitted to the bar, two years later being also admitted to practice before the Supreme Court of Pennsylvania.

Upon admission to the bar Mr. Doran associated himself with Mr. Bullitt and Mr. Samuel Dickson and his business soon grew prosperous, being confined principally to railroad and general corporation law. He has acted as consulting counsel for many well-known corporations and from the time of its organization was general solicitor of the Norfolk and Western Railroad, being still retained in that capacity after its reorganization in 1896. While his practice has grown to large proportions because he devoted himself with zeal and earnestness to it, he has also since 1880 given much of his time and ability to the development of the coal and iron interests of Virginia and West Virginia.

Mr. Doran has to some extent been an author. In 1876 he read a paper on «Building Associations» before the American Social Science convention; and in 1888 attracted considerable attention by publishing a pamphlet entitled 'Our Fishery Rights in the North Atlantic' which was an exhaustive investigation of an intricate and important subject and which the 'Boston Evening Transcript' described as «one of the most satisfactory contributions to the literature of the fishery controversy.' On December 12, 1876, he was married at Philadelphia to Miss Ida Warner, daughter of Joseph Warner and Caroline A. (Borden) Erwin, and to them have been born six children: Marie Louise, Alice Therese, John Henry, Caroline Borden, Josephine Lalor, and Warner Erwin.

John Barry Stanchfield

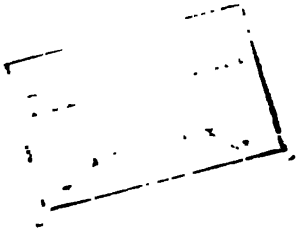
John Barry Stanchfield was born at Elmira, N. Y., March 30, 1855, the son of Dr. John K. and Glovina S. (Barry) Stanchfield, both of English descent. His grandfather, Samuel Stanchfield, the founder of the family in America, being a native of Leeds, England, became upon his arrival in the United States a founder of the town of Maine, which bears the same name. John K. Stanchfield, the father of our subject removed to New York state and practiced medicine, first in Weston and after 1852 in Elmira, where he had a successful career of over 30 years. The son received his education at the Free Academy of his native city and at Amherst College in 1872, where he was graduated in 1876. He was successful in his studies as well as socially popular, becoming a member of the ancient Psi Upsilon fraternity. His natural bent was toward the law, and this he developed at the Harvard Law School where he spent the two years following his graduation. Returning to Elmira in 1878, he entered the offices of the Hon. David B. Hill, and here supplemented his studies by a valuable practical training. Admitted to the bar in the same year he became Mr. Hill's partner in the following, and the firm of Hill and Stanchfield for six years continued as one of the most prominent in the state.

John B. Stanchfield

From this connection it was perhaps natural that Mr. Stanchfield should become a factor in political life, and from the outset his sympathies were with the Democratic party. In 1880 he was elected district-attorney of Chemung county and was re-elected for a second term of three years. This was in 1883, followed by his election as mayor of Elmira in 1886, and after two years in this office he returned to the practice of his profession as a member of the firm of Reynolds and Collins. He represented his district in the state assembly during 1895-96. In 1900 Mr. Stanchfield's firm was changed to Reynolds, Stanchfield and Collins, which later opened an office in New York City, where Mr. Stanchfield has since taken up his residence. In the same year he was the candidate of his party for governor of the state and received a larger percentage of the total vote than his party's Presidential candidate received either in that year or in 1896.

His chief professional work was in civil cases, but he also handled successfully many

Joseph L. Doran,



criminal cases which have became famous in the annals of the law. Among these may be mentioned People ex rel. Forbes vs. Taylor, which established a defendant's right to refuse to answer to any questions tending to connect him with a criminal offense. His client, Taylor, refusing to testify by Mr. Stanchfield's advice, was indicted for contempt of court, but in the subsequent trial, the Supreme Court sustained the latter's contention that the decision as to what would tend to incriminate rested with the witness and not with the judge sitting in the case.

Mr. Stanchfield is eminently a lawyer of the modern school, in that he does not rely alone upon his eloquence and brilliant wit, with which he is generously endowed. His success is rather the result of profound learning not only in a strictly legal sense, but covering a wide field of general knowledge and culture. His services have been sought by his party on many important occasions and he has been frequently mentioned for the highest honors within its gift. He is a member of the New York State Bar Association and the Bar Association of the City of New York; a member of the University and Manhattan clubs of New York, and of the City, Century and Country clubs of Elmira; the Oakland and Fox Hills Golf clubs, and the Masonic Order. He was married September 2, 1886, to Clara S., daughter of Henry G. Spaulding of Elmira, N. Y., and has two children, Alice and John Barry, Jr.

Levi Parsons Morton

Levi Parsons Morton was born at Shoreham, Vermont, May 16, 1824, the son of Rev. Daniel Oliver Morton and Lucretia Parsons Morton. He received an academic education and then engaged in mercantile life. After a short career at Enfield, Mass., he established himself in business at Hanover, N. H., but in 1845 went to Concord, N. H., where he opened a dry-goods store. Soon after he went to Boston and then to New York, in the latter city organizing and becoming the head of the dry-goods house of Morton and Grinnell.

The dry goods business did not strongly appeal to Mr. Morton's ideas of a useful and successful career and he soon turned his attention to finance, in 1863 establishing the firm of Levi P. Morton and Company, with a foreign branch under the name of L. P. Morton, Burns and Company. In 1869 this firm was dissolved and Mr. George Bliss became associated with Mr. Morton under the name of Morton, Bliss and Company. At the same time Sir John Rose, minister of finance of Canada, went to London to enter the foreign branch, the name of which was then changed to Morton, Rose and Company. This London branch acted as the European fiscal agent of the United States from 1873 to 1884; it was of great aid in the resumption of specie payments in 1879; and was the agency through which Great Britain paid to the United States the sum of $15,500,000 awarded the latter by the Geneva Arbitration Tribunal. In 1899 the firm of Morton, Bliss and Company voluntarily liquidated and was succeeded by the Morton Trust Company, now one of the leading financial institutions of New York.

Mr. Morton has also been identified with many other corporations, such as the Fifth Avenue Trust Company, the National Bank of Commerce, the Guaranty Trust Company, the Industrial Trust Company of Providence, and the Newport Trust Company. He is also a director of the Equitable Life Insurance Society and of the Home Insurance Company, and also helped to reorganize the Washington Life Insurance Company.

In the public affairs of the nation Mr. Morton has long been prominent and his party has benefited much by his wise counsel. In 1878 he was elected to Congress as a Republican from the eleventh district of New York (which was normally Democratic) and in 1880 was reelected by an increased vote. In 1880 he was mentioned as a possible candidate for the Presidency of the United States but refused to allow the presentation of his name; in 1881 he also declined the appointment to the office of secretary of the navy. In March, 1881, however, he accepted the post of minister to France offered him by President Garfield and thereupon resigned his seat in the Forty-seventh Congress. A brilliant term of four years now ensued but in March, 1885, when President Cleveland was inaugurated, he resigned from the diplomatic service and returned to this country. While in France Mr. Morton secured the legal status of American corporations in that country. He also drove the first rivet in Bartholdi's statue, "Liberty Enlightening the World," and on July 4, 1884, accepted the completed statue on behalf of the United States.

In 1888 Mr. Morton was nominated for the vice-presidency by the Republican convention at Chicago, receiving 591 votes against 234 for all other candidates. He was elected in November and on March 4, 1889, was inaugurated. As presiding officer of the Senate during the next four years he carried himself with great dignity and fairness, earning the approbation of men of all parties. In 1894 he was elected governor of New York and served one term during which many measures of great importance to the empire state were passed.

Mr. Morton has been twice married; first in 1856 to Miss Lucy Kimball, who died in 1871, and second to Miss Annie Street, in 1875. He has five daughters. He is a member of many well-known clubs and other organizations, including the Metropolitan, Union League, Lawyers', Republican, and Downtown clubs. The degree of LL.D. has been conferred on him, by Dartmouth College in 1881, and by Middlebury College in 1883.

Henry Draper

Henry Draper was born in Prince Edward County, Va., March 7, 1837, the son of the distinguished John William Draper. In 1839, when Henry was two years of age, his parents moved to New York City, his father having accepted the chair of chemistry of the University of the City of New York. The son was educated in the primary and preparatory schools connected with the university, and when 15 years of age became an undergraduate in the collegiate department. After two years of study, however, he abandoned the classical course and entered the medical department, from which he was graduated with distinction. But as he was too young to be granted a diploma, he traveled in Europe for a year and did not receive his diploma until 1858. In 1859 he was elected to the medical staff of Bellevue Hospital, New York, serving there for 18 months; but in 1860 he resigned this position to become professor of natural science in the university. In 1866 he was appointed to the chair of physiology and soon afterward became dean of the faculty, managing the affairs of the college with marked ability. After seven years of arduous labor he resigned from the medical department, as the strain of teaching both physiology and analytical chemistry, which for several years he had added to his other duties, threatened to undermine his health. In January, 1882, upon the death of his father, he was elected to the chair of chemistry in the university and continued in this capacity until the close of the collegiate year, when he entirely severed his connection with the university.

Dr. Draper had been reared in a scientific atmosphere, and at an early age began to display the bent of his genius. When only 20 years of age, before he had taken his medical degree, he made an exhaustive investigation of the functions of the spleen, illustrating it with microphotographs of rare excellence, considering the as yet undeveloped state of that science. The results of this research were embodied in a paper afterward published as his graduating thesis. While engaged in this study he discovered the value of palladious chloride as an intensifier for negatives.

During his stay in Europe, he visited Lord Rosse, at Parsonstown, Ireland, and there saw the great reflecting telescope, which inspired him with the desire to develop the science of astronomical photography. Upon his return home he constructed several telescopes embodying his own ideas and mounted these instruments in an observatory built on his father's estate at Hastings-on-Hudson. During the summer months Dr. Draper made astronomical observations there, but during the winter he carried on investigations in New York, chiefly in such subjects as did not require a telescope, and for this purpose furnished a special physical laboratory in the stable at the rear of his city house. Numerous observations were now undertaken and many important discoveries made. In 1872 he obtained a beautiful photograph of the spectrum of Lyræ (Vega), showing the dark lines, and later obtained more than 100 excellent stellar spectra, most of which had a photograph of the spectrum of Jupiter, Venus, or the Moon on the same plate for reference. In 1873 Dr. Draper published an exquisite photograph of the diffraction spectrum; and in 1876 he succeeded in photographing upon the same plate the solar spectrum and the spectrum of an incandescent gas with their edges in complete contact. A careful study of this photograph convinced him that oxygen actually existed in the sun and also that this gas existed there under conditions of temperature which caused it to radiate more light than the surrounding solar masses. Continued observations upon a larger scale finally proved the truth of his assertion.

In making his photographs of stellar spectra Dr. Draper used the gelatino-bromide dry process, and noticing the extreme sensitiveness of the plate, he determined to attempt the photographing of a nebula by this process. On September 30, 1880, he succeeded in obtaining a photograph of the nebula of Orion; on March 11, 1881, he obtained a larger photograph which showed the details much more clearly; and finally, on March 14, 1882, he secured a photograph, which showed stars of the 14.7 magnitude on Pogson's scale, invisible to the eye, and clearly and beautifully portraying the faint outlying regions of the nebula itself. This was one of his greatest triumphs.

In 1874 Dr. Draper was appointed director of the photographic department of the United States Transit of Venus Commission, and in recognition of his services a special gold medal in his honor was struck at the Philadelphia mint. In July, 1878, he organized a party to observe the total eclipse of the sun and obtained an excellent photograph of the corona and another of its diffraction spectrum which was apparently continuous. In 1880, after an exposure of 50 minutes, he photographed a number of spectra of Jupiter, and in June, 1881, obtained several excellent photographs of the comet and also of its spectrum.

In addition to his duties in the university and his scientific work, Dr. Draper gave much time to outside affairs. In 1867 he married Mary Anna, daughter of Courtlandt Palmer, of New York, and upon the death of the latter in 1874, Dr. Draper was elected managing trustee of a large estate. The task of reducing this estate to a solid investment basis was accomplished with signal ability and success. In 1861 Dr. Draper was appointed surgeon of the Twelfth New York Regiment of Volunteers and served with great credit; and in 1876 he was appointed one of the judges of the photographic section of the Centennial Exhibition. He was a member of the Astronomische Gesellschaft, the National Academy of Sciences, the American Philosophical Society, the American Association for the Advancement of Science, and the American Academy of Arts and Sciences. In 1882 the University of Wisconsin and the University of New York conferred on him the degree of LL. D.

In the fall of 1882 Dr. Draper in company

Henry Draper M.D. LL.D.

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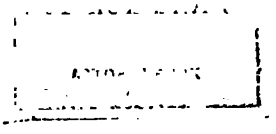


George Greer

with a few friends went to the Rocky Mountains to hunt and during the journey through the mountains the party was overtaken by a severe snowstorm and obliged to camp without shelter. Shortly after his return to New York Dr. Draper was seized with congestive chills and did not long survive, passing away November 4, 1882.

Dr. Draper's writings were numerous and valuable and consisted chiefly of descriptions of his astronomical discoveries, but he also wrote a 'Text-Book on Chemistry;' a history of the petroleum industry; a paper 'On the Changes of the Blood Cells in the Spleen;' a 'Report of the Chemical and Physical Facts collected from the Deep Sea Researches made during the voyage of the Schoolship Mercury;' etc.

George Greer

George Greer was born in Neshannock Township, Lawrence County, Pa., January 28, 1844. He is one of the two sons of the late William Y. Greer and Amanda Greer and is descended from an old Scotch family which later settled in the north of Ireland and thence emigrated to America. Mr. Greer's great-grandfather, Hance Greer, came from Ireland about 1808 and located near Nohlestown, Allegheny County, Pa., and his grandfather, John Greer, was one of the earliest settlers and pioneers of Lawrence County, having settled in Neshannock Township about 1820. Mr. Greer's mother, a descendant of General Nathanael Greene, one of the most renowned of the Revolutionary commanders, was born near Painesville, Ohio, whence her father, George Greene, had emigrated from eastern Pennsylvania.

The young man received only such educational training as the common schools at New Castle afforded and soon after leaving school embarked in business. His father, William Y. Greer, had been largely interested in agriculture, in early railroad development and in banking, having been one of the original stockholders and until his death a director of the National Bank of Lawrence County, and the son followed in the father's footsteps, but gradually and greatly widening the scope of his business operations, so that for the past 25 years he has been actively engaged in and prominently identified with the largest and most prosperous banking and manufacturing interests of New Castle.

Mr. Greer is vice-president of the First National Bank of New Castle, a director and one of the original stockholders of the National Bank of Lawrence County, and was also identified with the organization of the Shenango Valley Steel Company. In 1892, in conjunction with John Stevenson, Jr., W. S. Foltz, Charles Greer and S. W. Cunningham, Mr. Greer organized and was elected president and general manager of the New Castle Steel and Tin Plate Company, the first works manufacturing a product of that nature to be located at New Castle. He continued to serve the company as its chief official until it was absorbed by the United States Steel Corporation. In January, 1899, in addition to his duties in connection with the New Castle Steel and Tin Plate Company, Mr. Greer undertook the management of the unfinished Shenango Tin Plate Works, and not only organized and completed the latter works but also successfully operated them until July 1, 1908, when he severed his connection with the company to devote his entire energies to the management of his varied interests in other manufacturing and investment enterprises, located in New Castle and other cities.

Only a few of the more important industries with which Mr. Greer is connected can here be mentioned. He is a large stockholder and chairman of the board of directors of the La Belle Iron Works, of Steubenville, Ohio; he is a stockholder and director in the H. C. Fry Glass Company, of Rochester, Pa., a company which has done a lucrative business in the manufacture and sale of the finest quality of cut glass made in the United States; and is a stockholder in the Preston County Coal and Coke Company, located near Morgantown, West Virginia, of which his nephew, H. C. Greer, is president. Mr. Greer is also one of the original stockholders of the Republic Rubber Company, of Youngstown, Ohio; is president of the New Castle Portland Cement Company, of New Castle, Pa., of which his brother, Charles Greer, is secretary and assistant treasurer; is a large stockholder and director in the Lehigh Shenango Portland Cement Company (the works and quarries of the two latter companies being located in the vicinity of New Castle); and is identified with and owns a considerable portion of the stock of a successful independent sheet steel company, which manufactures steel and markets it in finished product.

Mr. Greer is also a keen judge of the value of improved real estate, of which he possesses a large amount in New Castle and in Neshannock Township, Lawrence County, Pa., and he has recently built a handsome residence on North Jefferson Street, New Castle, and one of the finest business and office buildings in the city, on North Mercer Street, both of which have contributed much to the improvement and beautification of the city. Mr. Greer has devoted much time and attention to the breeding and raising of short horn Durham and Holstein-Friesian cattle and now owns some of the best thoroughbred cattle in the western part of the state. Despite the exacting duties which his business and other enterprises entail Mr. Greer finds time to enjoy social life and is a member of several clubs and social organizations, and a trustee of the Chautauqua Institution, Chautauqua, N. Y.

Frank Smith Jones

Frank Smith Jones was born at Stamford, Conn., August 19, 1847, one of the three sons of Isaac Smith Jones and Frances J. Weed. The first representative of the Jones family in America, William Jones, came to America in 1660 in the same ship with the regicide judges, Whalley and Goffe, who had fled to the New World to escape the vengeance of the son of Charles I. of England. In 1661 an order arrived from England for the arrest of Whalley and Goffe, but with the aid of Jones they escaped and were never apprehended. Jones settled in New Haven and in 1664 was chosen governor of the colony of Connecticut. Mr. Jones's mother was a member of the well-known Weed family of Stamford.

Mr. Jones obtained his early education in the schools of Stamford, supplementing it with a course in the Eastman Business College, Poughkeepsie, N. Y., whence he graduated in 1862. He then entered the employ of A. J. Johnson, publisher of 'Johnson's Universal Cyclopedia' with whom he remained for seven years, by hard work and serious application to his duties gaining such favorable recognition that he eventually became general manager. His untiring efforts to secure commercial success for this undertaking were rewarded by a pleasing tribute in the preface to the 'Cyclopedia.'

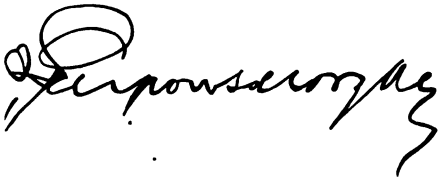
With his brothers, Charles Fisher and Cyrus Daniel Jones as partners, Mr. Jones in 1872 embarked in the tea and coffee business at Scranton, Pa., and after a hard struggle successfully laid the foundation for the Grand Union Tea Company, now one of the greatest enterprises in the United States. But though the gross income of the business for the first year was $12,000, the margin of profit was insufficient to support all three brothers, and it was therefore agreed in 1873 that Frank should again enter the employ of Mr. Johnson until such time as the business should warrant expansion. In the meantime each of the brothers saved as much as possible so that a branch store might be opened at the earliest opportunity and it was not long before the much-desired goal had been attained. In the spring of 1876 a new store was opened at East Saginaw, Mich., and Frank S. Jones again resigned his position with Mr. Johnson to take charge of the new branch. As in the first store Mr. Jones sent his wagons in every direction in search of trade and his great expenditure of energy was amply rewarded. Having now gained a strong foothold it became merely a matter of time as to the number of stores that might be established and successfully operated. It was not long before the brothers controlled a dozen stores and since that time the firm of Jones Brothers has gone steadily forward until at the present time it owns and operates branches in more than 200 cities and towns, employing over 5,000 wagons.

In 1886 Mr. Jones assumed charge of the headquarters of the company at Brooklyn and gradually brought the work of every department up to the highest degree of efficiency. New buildings were erected, new machinery installed, new methods instituted, in fact every idea or plan that would promote the welfare of the company was invoked to keep the business abreast of the times and ahead of competitors. As the business grew other articles of merchandise were added and beside tea and coffee the company now produces baking powder, spices, flavoring extracts, and soap. The brick and steel warehouses and factories of the company cover an entire block in Brooklyn, with 260,000 square feet of floor space. The company annually distributes about 55,000 tons of tea and coffee, and its soap factories, comprising two six-story buildings, have a daily output of 1,500 boxes of 80 lbs. each. The bottling plant has an average daily output of 750 quarts of flavoring extract. In addition the company manufactures the cans for the baking powder and spices, the daily production being 50,000 cans, and also operates its own printing plant with a capacity of 250,000 labels and printed bags daily, beside all the stationery and other printed matter required for the branch stores. The company also publishes a monthly paper, 'The Grand Union Herald,' which has a circulation of 700,000 copies.

In addition to his activities in connection with this business Mr. Jones also engaged in other enterprises. With his brother, Cyrus D., he established the Anchor Pottery at Trenton, N. J., which is now a thriving business with about 1,200 employees. He is treasurer of the Sidney Novelty Company, of Sidney, N. Y., and has also made large investments in coal and lumber lands in Pennsylvania and the southern states which have proved to be highly profitable. In 1903 he retired from active participation in the affairs of his various enterprises that he might enjoy a richly deserved rest.

Mr. Jones has long been interested in affairs outside of the world of business and has been especially active in organizations devoted to the public welfare of Brooklyn. He is a trustee of the Brooklyn Institute of Arts and Sciences to which he presented in 1898 the Gebhard collection of minerals and also the Nuemogen entomological collection containing many rare specimens; of the Central Congregational Church of Brooklyn and of Wesleyan University, at Middletown, Conn.; and for several years was a trustee of the Brooklyn Society for the Prevention of Cruelty to Children and a director of the Brooklyn City Mission and Tract Society. He also gave $40,000 to the Bedford Branch of the Young Men's Christian Association and thus was largely instrumental in assisting that body to become such a vast power for good. These constitute but a small portion of his benefactions but as the majority of his gifts are bestowed unostentatiously the total will probably never become known.

He has also found time to devote to the cultivation of friendships and is happy in possessing a wide circle of friends. He is a member



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J. F. Stoul

of the Chamber of Commerce, the Manufacturers' Association, and the National Arts Club, of New York, and of the Brooklyn, the Union League, the Crescent Athletic, the Brooklyn League, the Riding and Driving, the Rembrandt and the Congregational clubs, of Brooklyn. His blooded horses, trim yachts and handsome motor cars bespeak the refinement of his tastes in sports. In 1907 he presented the "Beechwood Plate" to the Bayshore Horse Show Association to be used at each successive exhibition as a competitive trophy for the best-trained saddle horse.

On June 4, 1879, Mr. Jones was married to Mary Louise, daughter of Henry A. T. Granbery, formerly of Norfolk, Va., and has two daughters, Henrietta Louise (Mrs. William R. Simons) and Maude Virginia (Mrs. Clarence F. Westin). Mr. Jones has been a resident of Brooklyn since 1886, his house of red brick and Indiana limestone being situated on St. Mark's Avenue. He also owns a delightful summer estate, "Beechwold," at Sayville, L. I.

Isaac Frank Stone

Isaac Frank Stone was born at Chicago, Illinois, March 2, 1867, the son of Theodore and Mary S. (Owen) Stone, his father then being a prominent and successful merchant in that city. He is of English descent and the first of his ancestors to emigrate to this country was John Stone who arrived here about 1650 and became one of the founders of Guilford, Conn.

The young man received his education in the public schools of Chicago and immediately entered business life. After a few years of business training when he was 21 years of age he established the firm of I. F. Stone, in Chicago, which in 1890 was succeeded by the partnership of Stone and Ware. Mr. Stone then decided that New York offered a larger field of opportunity for his great energies and in 1897 he came to New York, establishing there an eastern branch of the Stone and Ware Company. The eastern venture proved a success from the beginning chiefly because Mr. Stone threw the entire strength of his forceful personality into the work and so conducted the affairs of the company that no other result than success could have been the outcome.

In 1900 Mr. Stone became vice-president of the Schoellkopf, Hartford and Hanna Company and in 1906 president of the National Aniline and Chemical Company, which office he now holds. Mr. Stone is therefore one of the foremost manufacturing chemists in the United States and for several years has been a leading figure in all local and national movements in the trade. Beside devoting much of his spare time to the general welfare of the trade. Mr. Stone has many other business interests. He is a director of the Contact Process Company and of the South Nevada Company, is a member of the Chamber of Commerce and of the Board of Trade and Transportation and is a member of the advisory committee of the Metropolitan Bank. Mr. Stone is typical of the successful business man who has worked his own way up from a small beginning and he has a wide reputation for thorough knowledge, keen foresight and sound business methods and principles.

In 1905 he was elected president of the Heights Club, in 1909 became a trustee of the Drug and Chemical Club and in 1910 had the honor of being chosen to the presidency of the Chemists' Club of New York. He is also a member of the Lotos, City, Union League and New York Athletic clubs, the Society of Chemical Industry, and the College of Pharmacy and is an active member of Palestine Commandery of the Knight Templars. Politically Mr. Stone is affiliated with the Republican party and has always taken an active interest in the affairs of his party but he has never held nor sought public office. He has also written a paper entitled 'The Tariff and Aniline Colors.' On June 5, 1889, he was married at Chicago to Miss Mary Louise Peck and to them have been born two children: Grace H. (b. March 12, 1892) and Truman (b. October 15, 1894).

John Pierpont Morgan

John Pierpont Morgan was born at Hartford, Conn., April 17, 1837, the son of Junius Spencer Morgan, a banker of international renown, and Juliet Pierpont, his wife. The boy's early days were easy and comfortable and for the most part uneventful. His education was obtained in the Hartford schools and in the English High School, Boston, with a supplementary course at the University of Göttingen, Germany, where he was graduated in 1857.

He immediately plunged into business life, beginning his career in the banking house of Duncan, Sherman and Company, New York. In 1860 the house of George Peabody and Company of London (in which his father was largely interested, and which later became J. S. Morgan and Company) appointed him its agent and attorney in the United States; in 1864 he became junior member of the firm of Dabney, Morgan and Company, which confined its deal-

ings to investment securities, and continued his connection with this firm until 1871, when he entered Drexel, Morgan and Company, of which his father was also a partner

The younger Morgan did not, however, come into actual control of the vast resources of these companies for many years, as his father continued actively in business until his death in 1890. The son in the meantime had grown steadily in the confidence of the investing public and had also gained the favor and trust of the commercial and banking fraternity. In 1890, after his father's death, he entered therefore upon his duties as head of the houses of J. S. Morgan and Company, of London, Morgan, Harjes and Company of Paris, Drexel, Morgan and Company (later changed to J. P. Morgan and Company), of New York, and Drexel and Company, of Philadelphia, with the trust and confidence of a larger number of people than is usually allowed one man to enjoy.

Soon after assuming these large responsibilities, the panic of 1893 swept the country. The Sherman silver act of 1890 had caused a drop in the price of silver; gold flowed away from the country; and the officials of the United States treasury seemed unable to prevent it. Fifty millions of gold with a premium of over eight millions purchased in January, 1894, had been unable to stem the tide, and in February, 1895, Mr. Morgan formed a syndicate for the purchase of three and one-half million ounces of gold for delivery to the government, in return for $62,315,400 in bonds. He also used his influence to prevent the export of gold and thus greatly aided the government in a time of sore need.

In the financial panic of the latter part of 1907 Mr. Morgan undoubtedly achieved his greatest work in financial circles by placing his vast resources at the disposal of institutions in need of funds and by advice and aid, preventing what might have resulted in a far more disastrous and ruinous state of business stagnation and collapse. In 1901 Mr. Morgan also aided in floating the British war loan of $50,000,000 in America.

But though widely known as a banker, it is chiefly through his ability to organize and reorganize industrial combinations and enterprises that Mr. Morgan has become famous. The reorganization of railway systems first absorbed attention and the list of such rehabilitated enterprises is long, including, together with those in which he has a large or controlling interest, the Reading, the Northern Pacific, the Southern, the Albany and Susquehanna, the Erie, the Lehigh Valley, the Hocking Valley, the New York Central, the Louisville and Nashville, the Atlantic Coast Line, the New York, New Haven and Hartford, the Big Four, the Chesapeake and Ohio, the Baltimore and Ohio, the Central of Georgia, the Chicago, Indianapolis and Louisville, the Lackawanna, the Delaware and Hudson, the Ontario and Western, the Boston and Maine, the Pittsburg, Bessemer and Lake Erie, the Great Northern, the Burlington, etc.

Mr. Morgan now turned his attention to industrial combinations and in 1901 succeeded in uniting the Carnegie and other important steel works into one large corporation with $1,100,000,000 capitalization under the title «United States Steel Corporation.» While this undoubtedly has been his largest undertaking, he has also been concerned with the organization and consolidation of other enterprises of vast magnitude, such as the Rubber «trust,» the General Electric Company, the coal «trust,» and others of lesser degree. His most noted failure was the attempt to control transatlantic shipping by the purchase and consolidation of the large steamship lines. He was able to unite the White Star, the Red Star, the Leland, the Dominion and the Atlantic Transport lines but the Cunard lines refused to join the combination and the British government also opposed the plan. The enterprise therefore failed.

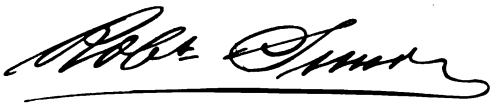
Mr. Morgan's activities have not been confined entirely to business but he has devoted much time to yachting, and the collection of works of art, priceless curios and other objects of a similar nature. He has been commodore of the New York Yacht Club; he helped to build the yacht *Columbia* which defeated Sir Thomas Lipton's *Shamrock;* and he owns the *Corsair,* one of the finest private yachts now afloat. Mr. Morgan also had a large and immensely valuable kennel of collie dogs.

Of paintings, tapestries, rare books and manuscripts, Mr. Morgan has made a large collection, the larger portion of which is contained in the handsome library and art museum adjoining his residence in New York. He also has many famous paintings in his London residence and in addition has presented a magnificent collection of fabrics to Cooper Union, a collection of Greek ornaments to the Metropolitan Museum of Art, and a collection of gems to the Museum of Natural History.

The list of charitable and other institutions to which Mr. Morgan has most generously contributed is long, his gifts including $1,350,000 to the Society of the Lying-in Hospital, New York; $1,000,000 to Harvard University; $500,000 to the New York Trade School; $500,000 to St. John's Cathedral, New York; $360,000 for the parish house of St. George's church, New York; a library at Holyoke, Mass., and smaller donations to many other benevolent causes, such as the Young Men's Christian Association, and the Loomis Hospital.

Mr. Morgan has been twice married; first, to Miss Amelia Sturges, who died in 1862, after one year of married life; and second to Miss Frances Louise Tracy in 1865. There are four children—three daughters and one son.

Mr. Morgan is a member of the Metropolitan, Union, Century, Union League, Tuxedo, Knickerbocker, Lawyers', Riding, Racquet, New York Yacht, Seawanhaka-Corinthian Yacht, Whist, Players', and other clubs of New York, and of many others in this and other countries. In 1908 Yale University conferred upon him the honorary degree of LL.D.



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Hermann Simon.

Herman Simon

Herman Simon was born at Frankfort-on-:-Main, Germany, April 29, 1850, the son of ›bert Simon and Marie Broell Simon. He :eived his early education at Hassel's Insti-:e, Frankfort-on-the-Main and later on at : Royal Weaving School, Muelheim-on-the-ıine. While still very young he became em-›yed in the silk textile business, soon gain-; the knowledge and ability of an expert this line of trade. He then determined to ırt a plant of his own and in choosing the ›st favorable place in which to begin opera-ıns he decided that the United States offered eater possibilities and opportunities for suc-ss than any of the older countries, a con-ısion which his father's uncle, Charles Si-›n, who had settled in Baltimore, Md., in 15, aided him in reaching. In 1868, therefore, ıen only 18 years of age, he wended his way the New World, but before attempting to ıt his ideas into effect he resolved to obtain thorough knowledge of American business ethods, for he realized that without such owledge his business would be handicapped om the beginning. It was not long before : had secured a position in the wholesale silk :partment of A. T. Stewart and Company, hose store was then located at Broadway and eade Street. His salary at the beginning was ıly $350 per year but before long he had :monstrated his capabilities to his superiors ıd he was gradually promoted from one re-›onsible position to another.

Meanwhile his brother Robert had come to ıe United States from the old country and ı connection with other duties took up the ıudy of the various processes of manufactur-ıg silk materials. For some time he was em-loyed at his trade in Paterson, N. J., and sub-:quently rose to the position of superintendent f the mill of Benkhardt and Hutton at West Hoboken, N. J. Both brothers had now had :veral years of experience in the respective ranches of the trade they intended to pursue nd in 1874 they felt that they were sufficiently ell equipped and that the time had arrived hen they could take the first steps in the :alization of this ambition. In that year the rothers formed a partnership under the name f R. and H. Simon, and erected a three-story actory at Union Hill, N. J., in which 70 power ›oms were installed, the first power looms for ıaking silk in the world. The looms were the ıvention of Robert Simon and with his broth-r's aid he built them and placed them in com-ıission, the two men being the first in the orld to be able to produce a piece of good rosgrain silk on power looms. It was also ecided by the partners that they would do heir own throwing and 3,000 spindles were nstalled; and beside this they handled the roduct of 165 hand looms, which at that time ere still in use and operated in the weaver's omes.

Success attended the efforts of the two ırothers from the very beginning and by 1883 he business had grown to such an extent that . new plant was found to be necessary, which vas accordingly erected at Easton, Pa., and is now larger than that at Union Hill. This was the first industry established in Easton, outside of the Lehigh Valley railroad shops. Some idea of the growth of the business may be given by stating that at first the mill employed 200 operatives whereas now there are 2,600; and the Union Hill plant has expanded until it covers an area equal to 58 city lots and the plant at Easton covers about 9 acres. For 27 years the two brothers worked hand in hand and side by side, mutually aiding each other and sharing each other's burdens but in 1901 Robert Simon, the younger partner, died, which in addition to being a sad personal affliction to the brother, was also a severe blow to the remaining partner since it left the entire weight of the heavy burden upon his shoulders. But while to Robert must be given a large share of the credit for the success of the business Herman Simon deserves no less credit for the remarkably able manner in which he has conducted the business alone since his brother's death. Although he is now the sole owner of the business, he continues to conduct its affairs under the old name of R. and H. Simon, in respect to his brother's memory.

Mr. Simon enjoys an enviable reputation as a technical expert in silk and he has introduced many improvements in the methods of manufacture and the general conduct of the industry; in his private office at Union Hill he maintains a laboratory in which he tests his own materials and does much experimental work. He is also interested in several other companies beside his own, including the New York Silk Conditioning Works which he and several associates started in 1882, and several silk throwing plants. He is also a member of the board of managers of the Silk Association of America.

At Easton, Pa., Mr. Simon maintains a handsome residence beside owning 60 acres of land, of which 9 acres are used for manufacturing purposes and the rest devoted to farming. He is an advocate of outdoor life and takes an especial interest in breeding horses, cattle and other live stock. He is also widely known as an art connoisseur and an amateur photographer; his already large collection of paintings and other art objects contains many beautiful specimens of the masters and in their selection he has displayed extraordinary judgment and excellent taste. Mr. Simon has traveled extensively. He goes to Carlsbad each year for the «cure» and at the same time attends to business affairs in France, Germany, Italy and Switzerland. He is a member of the German Verein, the Automobile Club of America, the Arkwright and the National Arts clubs of New York; the German Club of Hoboken; the Pomfret Club of Easton, Pa.; the Country Club of Northampton County; Hugh de Payens Commandery of the Knight Templars and several other organizations. He is also a member of the executive committee of the Northampton County Republican Club; and was a presidential elector in 1908 for the 26th congressional district of Pennsylvania.

Josiah Vankirk Thompson

Josiah Vankirk Thompson was born at Menallen Township, Fayette County, Pa., February 15, 1854, the son of Jasper Markle Thompson, a prosperous farmer and banker, and Eliza Caruthers Thompson. He is descended from the ancient Scotch-Irish family of Thompsons, the representatives of which first settled in the state of Pennsylvania between the years 1703 and 1753. Mr. Thompson's great-grandfather, William Thompson, was one of that band of patriots who so strenuously fought against oppression on the part of the mother country, and when war was finally declared he was one of the first to volunteer in the cause of liberty. He was one of the most efficient of the scouts of General Washington, and, fighting in a just cause with the additional incentive of providing for the future safety of his home and country, it was not long before he became distinguished by many, though unheralded, deeds of valor. Beside a large number of minor skirmishes and engagements, he took part in many of the more important battles of the war, including those at the Brandywine, Germantown, Trenton and Princeton, and he also was present at Yorktown when Cornwallis surrendered the British army.

A small country schoolhouse with its meagre equipment afforded the only means whereby Josiah V. Thompson could obtain the rudimentary elements of an educational training, but most fortunately he was happy in the possession of a father who realized and thoroughly believed in the advantages of a higher education, and accordingly at the age of 11 he was sent to Madison College at Uniontown. After completing his course at this institution he was given an additional course at Washington and Jefferson College, at Washington, Pa., whence he was graduated in 1871, at the early age of 17. The young man was much attached to farm life and was expert with the plow, but the father had mapped out a future for the son that was far removed from the tilling of the land, and soon after the latter had finished his education he was called to take a position in the First National Bank, of which his father was president. This, therefore, was the determining step in his future career, and the wonderful manner in which he developed in the banking business and increased his fortune clearly and most conclusively proved that the bent of his genius lay not in producing from the soil but in manipulating that which came from the soil. Undoubtedly, though, the foundation for his marvelous capacity and endurance under severe mental and physical strain was laid during his early life on the farm, when he developed a strength of muscle and ruggedness of health that have never forsaken him.

In November, 1871, therefore, the younger Thompson took the position of a clerk in the First National Bank and has been continuously identified with its career ever since. He had not occupied this position more than six months before he was promoted to the position of teller (April 3, 1872), and in less than six years had so far secured the confidence and esteem of his superiors that he was made cashier of the institution (June 5, 1877). He was not only made so by the board, but was unanimously and consistently elected over the application of six more good business men, some of whom were twice his age and had had a business experience of more years than Mr. Thompson was of age. On March 15, 1889, when Josiah was 35 years of age, his father died, leaving him what in those days was considered a handsome inheritance—$100,000—but instead of using the money to advance his own career he determined that others should have an equal chance to obtain the same solid foundation for a fine career that he had had, and he accordingly presented the entire sum to Washington and Jefferson College, as the Jasper M. Thompson endowment fund for the president's chair, believing that his father could not have wished for any higher or more noble object for his benevolence. He then set about making his own fortune, with most remarkable results.

In March, 1889, shortly after the death of his father, Josiah V. Thompson was elected president of the institution to succeed him, taking up the functions of his office April 1st. This bank was organized by John T. Hogg early in the fifties and for several years thereafter occupied a small apartment in the Tremont building, the entire banking offices of that time being much smaller than the present private office of the president. Later in its career the bank came under the control of Isaac Skiles, Jr., a prominent merchant of Uniontown, who merely used it as an appendage or side issue to his mercantile establishment. The bank continued to occupy its small quarters until May, 1864, when it was moved to the north side of Main street, adjoining a building known as the «Round Corner.»

During the Civil War, about six months after the passage of the National Banking Act of 1863, the Uniontown Bank was chartered as a national bank under the provisions of this law, its charter number being 270. About 1870 Mr. Skiles disposed of his holdings in the bank, and on January 11, 1870, the office of president was bestowed upon Jasper M. Thompson (*the father* of Josiah V. Thompson), who was one of the organizers and original directors of the old bank. Under his control and because of his progressive though conservative policies and unstinted labors in behalf of its affairs, the institution rapidly outgrew even its enlarged quarters. It was moved in 1883 into the «Round Corner» itself, but after the younger Thompson had joined his father the business expanded to such an enormous extent that it again became cramped because of its limited facilities. Mr. J. V. Thompson thereupon in 1901 determined to erect a building expressly adapted to banking purposes, and by March 31, 1903, had housed the bank in a handsome eleven-story building. This he did in spite of objections that the building was too large for a city of only 8,000 inhabitants. «Thompson's

J. V. Thompson

olly," as it was called, was built on the most proved plans and equipped with the best of odern appliances, its safety deposit vault, hich is a duplicate of that in the Frick build-g, Pittsburg, being one of the best ever con-ructed.

The First National Bank of Uniontown, un-er Mr. Thompson's guidance and management, as had a phenomenal growth, now leading the onor roll of the banks of the United States id having more surplus and profits in pro-ortion to capital than any of the 6,288 banks this country. In June, 1870, its surplus was ,665.16, its deposits $70,706.34 and its total sources $194,313. In 1910 its surplus was $1,-7,000, its deposits $7,500,000 and its total re-urces $4,000,000, and all this in addition to e continuous payment of handsome dividends. he dividends have been paid at the rate of % annually since 1903, date of occupancy, and r many years prior the bank had paid 15% id never passed but one dividend, which was the panic of 1873. Furthermore, every dollar f the bank's surplus has been accumulated ver and above the handsome dividends re-erred to.

One of the unusual things about the bank that not an official or employee is under ond, and they are the best paid "under em-loyees" in any bank in the United States.

Outside of his banking interests Mr. Thomp-on has embarked in many large enterprises, rincipally the conservative handling of large oal land investments, which has greatly in-reased his wealth. With a fortune estimated t more than $15,000,000, he is the largest indi-idual owner of coal lands in the United States, is most extensive holdings being in Greene, Vashington and Allegheny counties, Pennsyl-ania, and in West Virginia. Mr. Thompson s also known as the "coke king" of the Jnited States and is connected, either as stock-older, director or official, with the following orporations: The Thompson Connellsville Coke Company and The Tower Hill Connells-ille Coke Company, of both of which he is ice-president, and the Rich Hill Coke Com-any. Mr. Thompson is also president of the Jniontown cemetery of Fayette county. He would not allow a deed to be made after going nto the company in an official capacity until hey had first endowed a fund put in charge of the Fidelity Trust Company of Philadelphia, the amount of which would be sufficient to maintain, care for and perpetuate.

The wonderful success attained by Mr. Thompson is undoubtedly the result of the con-tinued application of four of his most conspicu-ous characteristics—industry, politeness, gen-erosity and positiveness. An industrious and indefatigable worker himself, he has never re-quired of his employees or assistants that they work longer or harder than he, or even as long and hard, but, because of his genial qualities and his ability to inspire them by his own ex-ample with enthusiasm, few if any of his em-ployees would not work night and day to keep affairs moving smoothly and satisfactorily. A strong believer in personal courtesy, Mr. Thompson has required the same quality in his associates and employees, but, withal his cour-teousness, one has but to hear him speak to know that his opinions are decidedly positive and that doubt and hesitation are foreign to his nature. Moreover, Mr. Thompson is a keen reader of character and loyal to those in whom he reposes his trust, and rarely has his confi-dence been betrayed. This ability has greatly aided him in the bestowal of his munificence, for in untold instances Mr. Thompson has given unsolicited help and loaned money with abso-lutely no security to struggling men whom he thought deserving of aid.

The qualities combined have brought him a host of friends who trust in his leadership implicitly. These qualities have resulted in gathering around him in his banking house a class of employees who require no bonds to insure their honesty. Mr. Thompson rewards his employees for faithful service by substan-tial salaries, and in addition allows them to participate in the profits of some of his indi-vidual operations. He rewards the trust of his friends by sharing his enormously profit-able investments with them, and in no single instance has this confidence been misplaced. He gives his personal attention to all the details of his many private operations as well as to the affairs of the bank, simply requiring of his partners in such operations that they put up their shares of the purchase money at the beginning. He does the rest and simply sends a statement of the profits of his dealings. In all the coal land deals with which Mr. Thomp-son has been connected not once has a sale been reported that resulted in anything but profit to the purchaser.

Mr. Thompson has been twice married. He was first married at Geneseo, Ill., December 11, 1879, to Mary Anderson, daughter of John Anderson and Sarah F. Redman. She was an excellent horsewoman, a thorough housekeeper, and a member of the Congregational Church and of the Presbyterian Church in Pennsyl-vania. It may be truly said of her that to know her was to love her, and the mention of her name drew forth expressions of unbounded ad-miration and unrestrained praise. She died August 8, 1896. By his first marriage there were two sons—Andrew A. Thompson, formerly a member of the Pennsylvania state legislature and now treasurer and general manager of the Thompson Connellsville Coke Company, and John R. Thompson, assistant treasurer and superintendent of the Tower Hill Connellsville Coke Company. Mr. Thompson's second wife was Mrs. B. A. Hawes, whom he married in New York on August 11, 1903, on the same day sailing for a fifteen months' tour around the world. They returned on November 8, 1904, in time for Mr. Thompson to vote for his son Andrew, who was a candidate for a second term in the legislature, having first been elected two years previously, shortly after attaining his twenty-second year. Though the youngest member ever elected to the Pennsylvania legis-lature, his record shows that he served well, being several times called to the chair by the speaker.

Mrs. Thompson is an accomplished musician, a thorough horsewoman and excels in marks-manship. While in Australia with Mr. Thomp-son her musical talent excited the admiration and unstinted praise of Paderewski, the eminent pianist, who conducted a musicale in their honor in the city of Melbourne. David Mitchel, father

of Melba, the prima donna, together with a younger daughter and son, were among the company present. Mr. and Mrs. Paderewski have since been entertained by Mr. and Mrs. Thompson at "Oak Hill." But, unfortunately for the world of music, Mrs. Thompson's preference lay in the direction of home life and the felicity that could be secured there rather than in striving for the applause of multitudes and the admiration of eminences and royalties, and consequently the public has been forced to forego the pleasure of hearing a most charming voice.

Before departing on his world tour Mr. Thompson had made preparations to build a magnificent new home, and during his absence the work was carried on under the sole direction of his younger son, John R. Thompson, who resigned his position as paying teller in the First National Bank of Uniontown to oversee and push forward the work. Such rapid progress was made under the son's supervision that within a month subsequent to the return of Mr. Thompson and his bride the beautiful mansion at "Oak Hill" was ready for their occupancy. During their journey abroad Mr. and Mrs. Thompson had every opportunity for securing exquisite furnishings for their home, and the many gems collected on this trip have been arranged by Mrs. Thompson with such masterful and artistic skill that the house is unexcelled for homelike comfort.

Howard Elliott

Howard Elliott was born at New York City, December 6, 1860, the son of Charles Wyllys and Mary (White) Elliott. He entered the Lawrence Scientific School in 1878 as a member of the second year class, from the Cambridge High School, being then a resident of Cambridge; and was graduated in 1881 with the degree of civil engineer.

During the summer of 1880 he was level rodman in northwest Missouri in the service of the Chicago, Burlington and Quincy Railroad Company. After graduation he spent three months in Maryland, making surveys and doing miscellaneous work for the Mount Savage Fire Brick Company. In October, 1881, he went to Burlington, Iowa, and entered the service of the Chicago, Burlington and Quincy Railroad Company as a clerk, remaining there until January 1, 1882, when he was transferred to Keokuk, Iowa, the headquarters of the St. Louis, Keokuk and Northwestern Railway Company and of the Chicago, Burlington and Kansas City Railway Company, two subordinate companies of the Chicago, Burlington and Quincy Railroad Company. After serving as a clerk and cashier, he was appointed November 15, 1882, assistant auditor and assistant treasurer of these two companies. On January 1, 1887, he was promoted to the position of general freight and passenger agent of the same two companies, holding this position until May, 1891, with headquarters in Keokuk until 1890 when he moved to St. Louis. In May, 1891, he was made general freight agent of what was known as the Missouri Lines of the Burlington—made up of the Hannibal and St. Joseph Railroad, the St. Louis, Keokuk and Northwestern Railway, the Chicago, Burlington and Kansas City Railway, and the Kansas City, St. Joseph and Council Bluffs Railroad, something over 1,000 miles of road in northern Missouri and southern Iowa, with headquarters in St. Louis. In January, 1896, he was appointed general manager of the same properties, with headquarters in St. Louis and St. Joseph. He was also an officer and director of a number of companies connected with the railroad. While holding these positions he traveled extensively through the middle West and South, making one trip to Old Mexico, one to California and one to Portland and the north Pacific coast. In 1900 he was offered the position of general manager of the main part of the Chicago, Burlington and Quincy Railroad, with headquarters at Chicago, but having his home and various interests in St. Louis, he declined the position. In May, 1901, he was elected second vice-president of the Chicago, Burlington and Quincy Railway Company, in charge of the maintenance and operation of all lines—about 8,500 miles—with headquarters in Chicago, although he continued to make St. Louis his home.

He held this position until October 21, 1903, when he was elected president of the Northern Pacific Railway Company (vice Mr. C. S. Mellen, elected president of the New York, New Haven and Hartford Railway Company), and took charge of the property on that date with headquarters in St. Paul, Minnesota, to which place he moved his family November 1, 1904, where he now resides at 302 Summit Avenue. He is also president of the following corporations, owned or controlled by the Northern Pacific Railway Company: Minnesota and International Railway Company; Washington and Columbia River Railway Company; Clearwater Short Line Railway Company; Manitoba Railway Company; Minneapolis Terminal Railway Company; Monte Cristo Railway Company; St. Paul and Duluth Railroad Company; Washington Central Railway Company; Northwestern Improvement Company; Northern Pacific Irrigation Company; and director in a number of others. He is also a director in the First National Bank of St. Paul.

While in St. Louis, he was interested in the social and business life of the city, and was a member of the principal organizations, retaining his membership since going to St. Paul in the St. Louis Club, St. Louis Commercial Club and St. Louis Country Club. He served for a long time as director of the St. Louis Union Trust Company, but resigned after mov-

ng to St. Paul. He took an active interest n the movement for celebrating the one hun-ıredth anniversary of the Louisiana Purchase, vas a delegate from Missouri in the convention ıf states that decided to have an exposition ır world's fair, and served on the executive ommittee of the Louisiana Purchase Exposi-ion Company for several years; and was asked o give up his railroad work and associate ıimself with the active management of the :xposition, but declined. He is a member of he American Academy of Political and Social Science; American Forestry Association; American Society of Civil Engineers; American Railway Association; American Railway Guild; American Society of Maintenance of Way; National Geographic Society; Sons of the American Revolution, and of the following clubs: University Club of New York; Chicago Club; St. Louis, Commercial and Country clubs of St. Louis; Minnesota Commercial, Town and Country, Informal and Nushka Curling and Skating clubs of St. Paul; Harvard Club of Minnesota; Spokane Club; Union and Country clubs of Tacoma, and the Commercial Club of Duluth. He is a trustee of the St. Paul Institute of Arts and Sciences and one of the 30 overseers of Harvard College, there being only three who live west of the Allegheny Mountains. He does not take an active part in politics, but in a general way is affiliated with the Republican party and attends St. John's Episcopal Church.

Mr. Elliott has always taken an interest in the community in which he lives and is interested in the growth of the northwest. In 1909 he served as president of the national apple show at Spokane and at the request of the board of trustees served again in 1910. He was married at St. Louis on October 12, 1892, to Janet, daughter of the late Derich Algernon and Julia (Churchill) January of St. Louis, and to them three children have been born: Janet (b. October 17, 1893), Edith (b. November 29, 1895), and Howard, Jr. (b. November 26, 1899).

George Bruce Cortelyou

George Bruce Cortelyou was born in New York City, July 26, 1862, son of Peter Crolius and Rose (Seary) Cortelyou. He attended the Hempstead Institute, Hempstead, Long Island, and later the State Normal School at Westfield, Mass., where he was graduated in 1882. After studying music at the New England Conservatory, Boston, he turned to stenography, and while engaged in its study in New York he took a course in the New York Hospital so as to become more expert in taking testimony in medical cases.

George Bruce Cortelyou

He was associated with James E. Munson as general law and verbatim reporter during 1883-5, and the next four years were spent as principal of several preparatory schools in and about New York. Entering the public service in 1889 he acted as stenographer and secretary to various officials in New York, including the post-office inspector and the collector of the port. Two years later he became stenographer to the fourth assistant postmaster-general in Washington, and his exceptional abilities secured his advancement and brought him to the attention of superior officers. On the recommendation of Postmaster-General Bissell in 1895 he was made stenographer, and three months later executive clerk, to President Cleveland. In the meantime Mr. Cortelyou had studied law at Georgetown University and was graduated LL.B in 1895, receiving the degree of LL.M. from Columbian (now George Washington) University in 1896. Retaining his clerkship under President McKinley, he rose to the position of assistant secretary to the President July 1, 1898. This proved a stepping stone to the important post of secretary to the President, which he accepted upon the resignation of John A. Porter, in April, 1900. Indeed, the latter's ill health had devolved upon Mr. Cortelyou the secretary's duties for a year previous to his official appointment, a particularly arduous period on account of the Spanish-American War. A still greater strain was put upon him by the assassination of the President, whom he attended night and day until the hour of death. Held in the highest esteem by Mrs. McKinley as well as her distinguished husband and his friends, she sent for him to open and read her husband's will, and transferred her administrative powers to him and Judge William R. Day.

Like all of the McKinley cabinet, he was retained in office by President Roosevelt. The new cabinet position of secretary of commerce and labor, being created February 16, 1903, he had the distinction of becoming its first incumbent. His task was to organize an executive force out of entirely new materials, except where bureaus from other departments were incorporated under the new organization. These included the lighthouse board, lighthouse establishment, steamboat inspection service, bureau of navigation, United States shipping commissioners, national bureau of standards, coast and geodetic survey, the commissioner-general

of immigration, the bureau of immigration, and the bureau of statistics, all from the treasury department, the bureau of the census from the department of the interior, and the bureau of foreign commerce from the department of state. The independent commissioner of fish and fisheries and the department of labor also came under his authority, to which were added a bureau of corporations and a bureau of manufactures. The new cabinet officer was somewhat handicapped, particularly in the organization of the last-named bureau, by the reluctance of Congress to appropriate the funds which he deemed necessary to so comprehensive a department. Nevertheless it began its existence as one of the largest and most complicated branches of the Federal service, having thirteen subdivisions and employing about 10,000 persons. Congress defined "the province and duty of said department" as being "to foster, promote, and develop the foreign and domestic commerce, the mining, manufacturing, shipping and fishing industries, the labor interests and the transportation facilities of the United States." Secretary Cortelyou in his first annual report said concerning its policy: "The department deals with the great concerns of industrial and commercial life. To be of service to these interests it must have their hearty coöperation and support. It must be non-partisan in the highest and broadest sense. It must recognize no distinction as between large and small interests. It must adhere rigidly to the lines marked out since the foundation of the government for Federal agencies in executing the will of the people."

Having been selected in 1904 as chairman of the Republican national committee he resigned the secretaryship, and after a successful campaign his services were rewarded by the appointment as postmaster-general in President Roosevelt's second administration, March 4, 1905. This marked a notable epoch in Mr. Cortelyou's career, for he had become the head of an important branch of the government in which ten years before he was but a clerk, a unique example of advancement by ability alone. Familiar with the workings of the postal service, he completely reorganized the department and placed it on a business basis. He established a "tenure during good behavior" for fourth-class postmasters, and later for the higher classes appointed by the President, as far as possible, under the law. He greatly improved the rural free delivery system, recommended parcels delivery on the rural routes, and established more stringent regulations to prevent the use of the mails for immoral and fraudulent purposes. Under his administration the deficit was materially reduced; parcels post agreements with foreign countries were extended, and the whole service rendered more efficient and certain.

On March 4, 1907, Mr. Cortelyou was appointed to succeed Leslie M. Shaw, resigned, as secretary of the treasury, and in this capacity he had to deal with the memorable financial panic of 1907. He first undertook to ease the markets before the onset of the panic, by making weekly deposits of government cash with banks in sections where currency seemed to be the scarcest. The $26,000,000 thus employed greatly ameliorated the situation, but the constantly increasing stringency in the monetary centers nevertheless resulted in the forced suspension of several important institutions. He now transferred within four days $35,000,000 from the treasury to various banks, accepting as security such state, municipal and railroad securities as savings banks are permitted to invest in. But in spite of the $225,000,000 which the treasury poured into circulation, the associated banks of all the greater cities had to resort to payments in clearing-house certificates, and Secretary Cortelyou then appealed to Congress for the enactment of an emergency currency law. By this law not less than ten banks in contiguous territory, under prescribed conditions, may form a national currency association, becoming a body corporate, for the purpose of issuing circulating notes founded on state and municipal bonds and commercial paper as prescribed in the act, and may increase or contract such circulation, subject to a specific federal tax of 5 per cent. per annum for the first month and 1 per cent. per month thereafter until the rate shall equal 10 per cent. per annum. While the emergency provision expires on June 30, 1914, a national monetary commission was created by the same act, consisting of 18 members of both houses of Congress to devise a permanent remedy in the form of an elastic currency system.

Mr. Cortelyou retired from official life at the end of the Roosevelt administration, and on March 9, 1909, became president of the Consolidated Gas Company of New York City. During his official career he had given ample evidence of an executive ability of the highest order, and proved himself to be a business man of unusual capacity, while his management of the treasury department during a most crucial period showed him to be a great financier. It was therefore natural that one of the largest and most complex corporations in the world should turn to him at a time when the leadership of such a man was needed to rehabilitate it. Subsequent events have proven him more than capable to cope with the situation, for in spite of the forced reduction of its rate, by the law of 1908, the company has been able to declare a large dividend on its stock. Mr. Cortelyou is the most notable example in American life of high attainments in the public service without winning any distinction whatsoever in a private capacity or relying upon outside influences. He personally served three Presidents of strangely antagonistic characteristics and sat at the cabinet board representing three great departments, the aggregate number of employees of which was more than a third of a million. The degree of LL.D. was conferred upon him by Georgetown University in 1903, by Kentucky Wesleyan in 1905, and the University of Illinois in 1905. He was married in 1888 to Lily Morris, daughter of Dr. Ephraim Hinds, president of Hempstead Institute, and has five children.

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Robert H. McCurdy

Robert H. McCurdy

Robert H. McCurdy was born in New York City, May 26, 1859, the son of Richard A. McCurdy, formerly president of the Mutual Life Insurance Company of New York, and Sarah Ellen Little, his wife. He is descended from the ancient Scotch-Irish family of McCurdys, the first representative of which to settle in this country was John McCurdy, who came here in 1740. Richard A. McCurdy was a lawyer by profession, practising in New York with Lucius Robinson, afterward governor of the state, and in 1860 was appointed attorney for the Mutual Life Insurance Company of New York. Thereafter his rise in the company's service was rapid, he being elected vice-president in 1865 and president in 1885 upon the death of President Wilson. In 1906, after more than 45 years of service with the company, he resigned.

Robert H. McCurdy received his early schooling in Europe, but upon his return to this country he entered Harvard University for a higher course and was graduated from that institution in 1881 with the degree of A. B. Being now ready to enter upon a business career, the young man was easily persuaded by his father to enter the field of insurance, for the latter realized that the business was still in its infancy and readily foresaw the enormous proportions to which it could be expanded with proper initiative and conservative management. In December, 1881, therefore, the son entered the service of the Mutual Life Insurance Company in the New York agency, where he remained until 1886.

Up to this time American insurance companies had made practically no effort to secure business in foreign countries, the American and Canadian fields being considered broad enough. But in 1886 the Mutual determined to enter the foreign field so that the people of all nations could be equal participators with the American policyholders in the advantages to be secured from the expansion of the business. Accordingly, in that year a foreign department was established by the Mutual, and Robert H. McCurdy was placed in charge of it. So capably did he manage the affairs of the department that between 1886 and 1905 the business was extended to all countries of Europe and to Mexico, Australia and South Africa. During that period the premiums collected amounted to over $98,000,000 and the insurance issued and paid for exceeded $488,000,000. On July 1, 1903, Mr. McCurdy was elected a trustee of the company and made its general manager, but after two years of service in this capacity he resigned (December, 1905).

In 1908 Mr. McCurdy engaged in the banking business, associating himself with Mr. Norman Henderson and Mr. Louis E. Hatzfeld, the surviving partners of the old-established banking firm of Henderson and Company. He took the place of the late Mr. Charles R. Henderson, becoming the senior partner in the new firm of McCurdy, Henderson and Company. The firm has offices at 24 Nassau Street, New York, where a general banking and stock exchange business is conducted. Mr. McCurdy is also connected with several other corporations in the capacity of director, among them being the First National Bank, of Morristown, N. J., the International Bell Telephone Company, Limited, the Registrar and Transfer Company, of New York, and the Windsor Trust Company, of New York.

Mr. McCurdy has traveled extensively not only in this country but also in Europe and Mexico, and has covered quite thoroughly nearly every portion of these countries. He is greatly interested in field sports of all kinds and finds much pleasure not only in following them but also in actively participating in them. On September 19, 1888, he was married at Morristown, N. J., to Mary Suckley, daughter of John Suckley and Rosette Denning Morton. They have no children.

Abraham Francis Huston

Abraham Francis Huston was born at Coatesville, Pa., July 7, 1852, one of the seven children of Dr. Charles Huston and Isabella Pennock Lukens. His grandfather, Dr. Robert Mendenhall Huston, was a member of the faculty of Jefferson Medical College, of Philadelphia, and his father, who was a physician, was also a graduate of the same institution, later studying in Paris and Heidelberg. His grandmother was descended from the brother of Benjamin West, the famous painter, who for many years was historical painter to King George III, of England, and president of the Royal Academy, and who painted about 400 pictures, of which probably the most noteworthy are «Agrippina Landing with the Ashes of Germanicus,» «Death of General Wolfe,» «Battle of La Hougue,» «Death on the Pale Horse,» «Christ Healing the Sick,» the «Crucifixion,» and the «Ascension.» His mother was a daughter of Dr. Charles Lukens, head of the Lukens Iron and Steel Company, of Coatesville.

Having received a good education in his native town and having completed a course at Taylor Academy, Coatesville, the young man was prepared for college by private tutors. He

was then sent to Haverford College, at Haverford, Pa., and graduated from that institution in 1872 with the degree of bachelor of arts. Dr. Charles Huston (the father of A. F. Huston) entered the iron business in 1850 and was actively engaged in it up to the time of his death in 1897. He was considered one of the country's greatest experts on the manufacture of boiler plates and was chiefly responsible for the development of that branch of the Lukens works, which was the first in America to make boiler plates. In 1877 Dr. Huston was chosen chairman of a committee of representatives from the manufacturers of boiler plates appointed to confer with the board of supervising steamboat inspectors for the purpose of framing a proper standard of tests. Having conducted extensive experiments in the properties of iron and steel and having had much experience in the testing of boiler plates, Dr. Huston's recommendations were adopted by the board of inspectors. As a result of Dr. Huston's long experience and great ability he was also selected by Chauncey M. Depew in 1895 as the most capable man to prepare the history of the iron and steel industry for his 'One Hundred Years of American Commerce.'

It was only natural therefore that the younger Huston should be trained in the iron and steel industry. Immediately after leaving college he entered the Lukens Iron and Steel Company and worked in every department, both in the shops and in the office, so that he might have a thorough, practical knowledge of every branch of the business. In 1875, after three years of experience, he became the junior member of the firm of Huston, Penrose and Company, and ever since has remained a member of this firm and of the company which succeeded it, the Lukens Iron and Steel Company; in January, 1897, upon the death of his father, being elected to the presidency of the company.

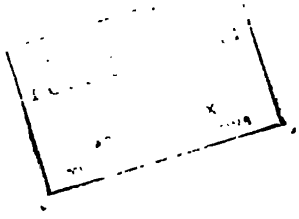
The Lukens Iron and Steel Company was originally established in 1790 by Isaac Pennock, who erected a mill for the manufacture of iron at Rokeby, Buck Run, Chester County, only four miles distant from the location of the present works. Twenty years later he bought a saw-mill property at Coatesville and converted it into an iron mill, this being the foundation of the present large works of the Lukens Company. From 1816 until his death in 1825 Dr. Charles Lukens, Pennock's son-in-law and the maternal grandfather of the present head of the company, carried on the business and upon his death was succeeded in the management by his widow, Rebecca W. Lukens. Mrs. Lukens developed the business in a most remarkable manner and displayed a wonderful and extraordinary amount of business acumen. Upon the death of Mrs. Lukens, her sons-in-law, Abraham Gibbons and Dr. Charles Huston, undertook the direction of the company's affairs, but in 1855 Mr. Gibbons retired, leaving the entire management in Dr. Huston's hands.

Dr. Huston and his partner, Charles Penrose, carried on the business together until 1881 when Mr. Penrose died and thus Dr. Huston was called upon to manage the business. He had, however, the aid of his two sons, A. F. and C. L., the former of whom, as said before, entered the company in 1872, and the three together gradually expanded the business until at the present time the works cover an area of more than 200 acres upon which stand twelve large buildings and employ nearly 2,000 operatives. Up to the time of Dr. Huston's death in 1897 the steel works were of rather small proportions, although they had been enlarged in 1890. Two years after Dr. Huston's death, at the time of a boom in the iron business, his sons began to greatly enlarge the plant, and as a result of their efforts during a period of three or four years, the plant was expanded to three times its previous extent. It had been Dr. Huston's openly avowed policy never to fall behind in the race but to keep well abreast of the times. He frequently said, «It is better in the iron and steel business to be ahead of the times rather than behind in the smallest degree.» In 1881, shortly after the death of Mr. Penrose, Dr. Huston's health began to fail, and the active management of the business devolved upon his eldest son, A. F. Huston, the doctor simply acting in an advisory capacity from that time until his death in 1897.

But the younger Huston's time has not been entirely occupied with the affairs of the Lukens Company. With the advance in position and accumulation of means came further responsibilities and new offices, and at the present time, in addition to his office of president of the Lukens Iron and Steel Company, Mr. Huston is president of the Coatesville Trust Company, a director of the Wilmington and Northern branch of the Philadelphia and Reading Railroad Company and in 1902 was president of the Association of American Steel Manufacturers. He is also interested in many institutions of a benevolent character and is president of the Coatesville Hospital.

Mr. Huston has always been very fond of traveling and has not only traversed a greater part of his native land but also of Europe. In 1883 he visited Europe and traveled from North Cape, Norway, to Naples, Italy, covering Norway, Sweden, Denmark, Great Britain and the Continent. He again went abroad in 1886 and a third time in 1889. In 1885 he visited many of the principal cities of Mexico, New Mexico, California, Colorado, Oregon, Washington and British Columbia. His favorite recreation is golfing, his skill in which has earned him many handsome trophies, and he is a member of the St. Davids Golf Club (of which he was for two years president) and the Merion Cricket Club. Mr. Huston has twice been married; his first wife was Miss Alice Calley, whom he married in Philadelphia in 1889 and who died in April, 1906, and his second wife, whom he married in October, 1907, was Miss Alfie Frances Sly, of Virginia. To the first union three daughters were born: Isabel (b. 1890), Alice R. (b. 1897), and Marjorie C. (b. 1899).

A T Houston



Chas. Houston

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James Theodore Harahan

James Theodore Harahan was born at Lowell, Mass., in 1843, the son of Thomas and Ann (McCuen) Harahan, of Scotch-Irish ancestry. After attending the public and high schools of Lowell until 1860, he entered the service of the Boston and Providence Railroad Company, as freight clerk in the Boston office. At the outbreak of the Civil War he enlisted in the First Massachusetts Infantry, and after three years' service was transferred to the United States Military Railroad in Virginia and the Carolinas, being afterwards detailed to Nashville, Tenn. There he remained after the close of the war in the employ of the Nashville and Decatur Railroad. He then served the Louisville and Nashville Railroad at various points, first as section boss, then clerk, and finally railway executive. From 1870 to 1872 Mr. Harahan had charge of the Shelly Railroad, and for the next seven years he was roadmaster of the Nashville and Decatur; superintendent of the Memphis line of the Louisville and Nashville, and until 1873 superintendent of its New Orleans division. During 1883-4 he was general superintendent south of Decatur and during 1884-5 manager of the entire road. Positions as general superintendent of the Pittsburg division of the Baltimore and Ohio, and assistant general manager of the Louisville and Nashville Railroad led up to the general-managership of the latter, which he held till October 1, 1888. In rapid succession he now became assistant general manager of the Lake Shore and Michigan Southern, general manager of the Chesapeake and Ohio, and general manager of the Louisville, New Orleans and Texas railroads, till on November 1, 1890, he was elected second vice-president of the Illinois Central Railroad, and placed in charge of operation and traffic. On November 7, 1906, he assumed the presidency of the road, which position he still holds.

James T. Harahan

The gradual rise and varied experience of Mr. Harahan were well calculated to produce an ideal executive, and his management of his company's affairs has borne out the promise of his earlier career. A master of details, he realizes their importance in operating a great railroad, and nothing escapes his personal attention. He is acquainted with every person connected with the affairs of the railroad and devotes much time to inspection tours which bring him in intimate touch with every employee. The systematic perfection of the operating department under his direction was exemplified during the World's Fair, when millions of visitors were adequately provided for on the Chicago suburban system without a single shortage of cars.

Mr. Harahan gave proof of his extraordinary strategic ability when he secured for his road, at an extremely low figure, the Louisville terminals and the line between Louisville and Memphis, the latter in the face of a strong opposition on the part of the Louisville and Nashville Railroad. To his able management and conservative methods have doubtless been due the recent enhancement of the Illinois Central's stock as an investment of great worth and stability. Mr. Harahan is a director of the Illinois Central and Subsidiary Companies, Central of Georgia Railway, Ocean Steamship Company, Terminal Railroad Association of St. Louis, Harris Trust and Savings Bank of Chicago, and the Bank of Commerce and Trust Company of Memphis.

He is a man of retiring disposition, deliberate and dignified in manner, possessing much charm of personality and a genuinely philanthropic nature, He is a member of the Chicago, South Shore, Merchants', Flosmore and Onwentsia clubs of Chicago; the Midday Club of St. Louis, the Pendennis Club of Louisville; the Tennessee Club of Memphis, and the Boston and Pickwick clubs of New Orleans. He was married in 1866, to Mary Kehoe, by whom he had four children. She died in 1897, and in 1899 he was married to Mary, daughter of Captain W. B. Mallory of Memphis, Tenn.

Charles Waterhouse Goodyear

Charles Waterhouse Goodyear was born at Cortland, Cortland County, N. Y., October 15, 1846, and died in April, 1911. His father, Bradley Goodyear, was of English descent and his mother, Esther P. Kinne, of Scotch descent. The family was founded in America in 1638 by Stephen Goodyear, who was deputy-governor of the New Haven colony from 1643 to 1658, when he died, and thus the family is one of the oldest in the United States, for the first permament settlement of New England had occurred only a few years prior to the arrival of Stephen Goodyear.

Charles W. Goodyear was educated at the Cortland, Wyoming and East Aurora academies and afterward supplemented this with a course

in law. He was then admitted to the bar and immediately began to practice, at various times alone and as a member of the firms of Goodyear and Tyler, Goodyear and Allen, and from 1882 to 1887 of Bissell, Sicard and Goodyear. He had also held public office during these years, in 1875 being assistant district attorney of Erie County, N. Y., and in 1876 district attorney of the same county.

In 1887 Mr. Goodyear entered into partnership with his brother, Frank H. Goodyear, to engage in the railway business, the lumber manufacturing industry and other industrial enterprises of the same extensive scale. These enterprises were so successful that Mr. Goodyear gradually extended his operations until at the time of his death he was an officer or director or largely interested in many prosperous corporations, including the Buffalo and Susquehanna Railway Company, the New Orleans Great Northern Railroad Company, the Great Southern Lumber Company, the Goodyear Lumber Company, and the Buffalo and Susquehanna Coal and Coke Company, of which he was president, and the General Railway Signal Company, the Western New York Water Company, the Consolidated Telephone Company, and the Marine National Bank, of which he was a director.

Mr. Goodyear had for many years been interested in matters of an educational nature and did not allow his large business interests to interfere in any way with his hearty support of and active co-operation in the affairs of the institutions with which he was connected. He had for several years been a trustee of the New York State Normal School at Buffalo, a councillor of the University of Buffalo, and a trustee of the Buffalo Historical Society, and brought to them the same untiring energy and keen business instinct that he exhibited in connection with his industrial enterprises, being largely instrumental in bringing these institutions to their present high grade.

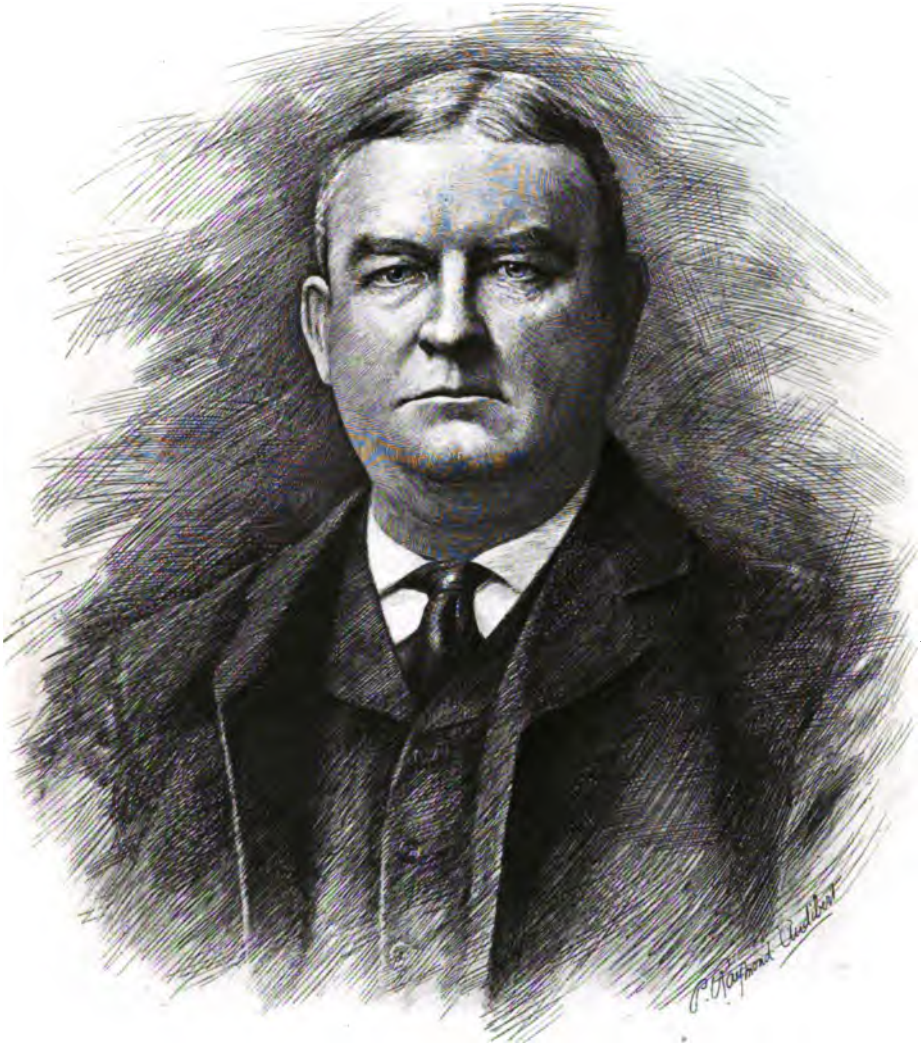
He had traveled extensively in Europe and also in Alaska and was well known in the social circles of Buffalo, having been a member of the Buffalo, Saturn, Ellicott, Park and County clubs of that city. He also belonged to the Lawyers' and Railroad clubs of New York. He was married at Collines, Erie County, N. Y., on March 23, 1876, to Miss Ella P. Conger, and to them were born four children: Anson Conger (b. June 20, 1877); Esther (b. May 20, 1881); Charles W. (b. April 6, 1883); and Bradley (b. October 18, 1885). Of the children three have been married: Anson to Miss Mary Forman, Charles W. to Miss Grace Rumsey, and Esther to Arnold B. Watson.

Charles Francis Brush

Charles Francis Brush was born in Euclid Township, Cuyahoga County, Ohio, March 17, 1849. His father, Colonel Isaac Elbert Brush, was a manufacturer of woolen goods in Orange County, New York, prior to migrating to Ohio in 1846. His mother was Della Wisner Phillips-Brush. Both parents descended from old lines of American families. One of the early ancestors on the paternal side was Thomas Brush, who came to the United States from England, and settled near Huntington, Long Island, in 1652. On the maternal side the first representative to settle in this country was Rev. George Phillips, who came with Governor Winthrop in 1630 and settled near Boston.

Charles Francis Brush obtained his early education in the public schools and graduated from the high school of Cleveland, Ohio. It was very early in his career that he showed a decided preference for electricity and chemistry, as well as engineering, and he graduated with the degree of Mining Engineer from the University of Michigan, in the class of 1869. Later he took the post-graduate degree of M. S. from the same university, and the degree of Ph. D. from the Western Reserve University; later this university conferred on him the degree of LL. D. In 1877 Mr. Brush dropped all his various interests in order to devote himself entirely to the development of electric lighting. In this he was the pioneer, and in 1878 he first gave to the world the now universally used electric arc light. In 1880 the Brush Electric Company was formed for the purpose of introducing his inventions, and the arc light grew quickly in favor; Cleveland was the first city to use the light for street lighting. In 1891 the light was introduced and found immediate favor, in England and all Europe. The business of the Brush Electric Company soon extended all over the globe. In 1881 Mr. Brush was decorated by the French government, Chevalier of the Legion of Honor, in recognition of his electrical discoveries, and in 1899 the American Academy of Arts and Sciences awarded him the great Rumford Medals, "For the Practical Development of Electric Arc Lighting." Mr. Brush has now practically retired from business affairs, yet he has an extensive laboratory at his home, where he continues to experiment on new appliances.

Mr. Brush is a member of the Union Club (of which he was president for two terms), also of the University, the Country, the Euclid and the Golf clubs of Cleveland; he is president of the Winous Point Shooting Club and a member of the University Club of New York. He is a life member of the Cleveland Chamber of Commerce, also of the Ohio State Board of Commerce, a member of the National Board of Trade, a fellow of the American Association for the Advancement of Science, a life member of the British Association, a life member of the American Society of Mechanical Engineers, a member of the American Institute of Electrical Engineers, the National



Charles W. Goodyear

Electric Light Association, the Archeological Institute of America, the American Historical Association, the Franklin Institute of Philadelphia and the American Chemical Society. Mr. Brush received the degree of LL. D. from Kenyon College in 1903. He is president of the Cleveland Arcade Company and of the Linde Air Products Company, vice-president of the Cleveland Chamber of Commerce, trustee of the Western Reserve University, Adelbert College, University School, Cleveland School of Art, Lake View Cemetery, corporator of the Case School of Applied Science, vestryman of Trinity Cathedral and member of the Sinking Fund Commission of Cleveland. In 1875 Mr. Brush was married to Mary E. Morris, and to them have been born three children; Edna, Helene and Charles Francis Brush, Jr.

John Griffin Carlisle

John Griffin Carlisle was born in Kenton County, Kentucky, September 5, 1835, and died at New York City, July 31, 1910. He was the oldest of eleven children. His father died when comparatively young and the burden of supporting his brothers and sisters was early thrown on young Carlisle. Like his mother, a true type of the New England woman, he was self-poised, self-reliant, sturdy, courageous and determined. He got his early education in the common schools near his home and later gained a knowledge of French. It was not the mental equipment for a great career, but young Carlisle had a craving for knowledge that would not be denied.

In August, 1855, an awkward, inexperienced country boy, he went to Covington and obtained a position as a public school teacher. But he had early looked to the law as an ultimate career, and after a year as school teacher he became a law student in the office of John W. Stevenson, who subsequently was governor of and then United States Senator from Kentucky. In 1858, when only 23 years of age, he was admitted to the bar, pleading his first case soon thereafter in the old court house in Covington, Ky. The case was one marked by dryness and subtleties of legal technicality. Such was his plain, calm, masterful presentment of the issues, however, that the address still is referred to as the best speech ever delivered in Covington's court house. It was the entering wedge that led the young barrister to his future successes.

Kentucky's unwritten rule that the law leads to politics found no exception in Carlisle's case. In 1859 he was elected to the lower house of the state legislature and then to the senate of that body, serving two terms. Throughout the Civil War he consistently opposed secession. He was a delegate-at-large to the Democratic national convention in 1868, which assembled in New York City and nominated Seymour for the Presidency. He was lieutenant-governor of Kentucky from 1871 to 1875 and was one of the alternate Tilden electors-at-large from Kentucky in 1876. With his election to the Forty-fifth Congress, in 1877, where he served seven consecutive terms, Mr. Carlisle immediately became a leader in American statesmanship. There he met two men who were to be his companions in many a battle against the Republicans and not infrequently against his own party men—Roger Q. Mills, of Texas, and William R. Morrison, of Illinois. They were the «Three Guardsmen» of tariff reform and served side by side in the Forty-sixth Congress as members of the committee on ways and means.

The method of his election to the national House of Representatives at various times gave evidence of the esteem in which he was held by his party. In 1880 he ran without opposition and virtually without a nomination. No convention was held, the executive committee looking on the matter as a foregone conclusion and merely suggesting that voters cast their ballots for Carlisle. The Forty-eighth Congress was marked by the overthrow of Samuel J. Randall, a man whom Carlisle resembled in character, disposition and physical appearance, and the Kentuckian was elevated to the Speakership, holding that post through the two ensuing sessions. In 1890 he was sent to the United States Senate by the people of his state, following the death of Senator James Beck. He resigned his seat in 1893 to accept the secretaryship of the treasury in President Cleveland's cabinet. His mastery of statesmanship and statecraft was strikingly displayed in coping with the financial problems that arose during the administration.

It was announced from Washington in 1895 that an issue of $100,000,000 of 4 per cent. government bonds had been sold in bulk to a syndicate, which included J. Pierpont Morgan and August Belmont, at about the same price paid for an issue of $63,300,000 worth the year before. The country was shocked for it was pointed out that these bonds, sold to the same syndicate at 104¾ were quoted in the market at 118 or more, and the new bonds would surely bring as much. The sale, as planned, would not only involve a great loss to the treasury, but the very suggestion impaired the national credit at home and abroad. Protests were made to the President who was assured that at a popular subscription the people would quickly subscribe for the whole issue and pay a higher price. President Cleveland therefore directed Mr. Carlisle to reject the syndicate's contract. The bonds were offered at public sale, and the people bid for $558,289,850 worth—almost six times the amount of the issue. Over 800 bids of 110 or better were received, whereas the syndicate had offered only 104½.

Following the close of the Cleveland administration Mr. Carlisle came to New York

City, where he engaged in the practice of law and maintained a residence at No. 2 Grammercy Park. Later he removed to Washington, D. C., but until his death he continued a New York office at No. 30 Broad St. Notwithstanding the free silver craze that swept the country in 1896, with the rise of William J. Bryan as a national figure, Mr. Carlisle remained staunch to the gold standard. For a time his stand made him unpopular with the Bryan wing of the Democratic party, and on several occasions, particularly during the Presidential campaign of 1904, he was the object of hostile demonstrations while on a speech-making tour of Kentucky, but this did not make him an apostate to his financial creed. On the other hand he was an ardent opponent of "imperialism," acting as vice-president of the Anti-Imperialistic League, with headquarters at Boston, which contended against the extension of Federal control to those countries that formed the material conquests of the Spanish-American War.

On January 15, 1857, he was married to Miss Mary Jane Goodson, daughter of John A. Goodson, a prominent Kentuckian. Two children were born: William K. and Logan Carlisle. Mrs. Carlisle died in August, 1905, and Mr. Carlisle survived his children also, the loss of his loved ones being keenly felt by him and undoubtedly contributing to his early death. He was a member of the Manhattan Club, of the Southern Society of New York and an honorary member of the Cobden Club, of England.

John Finley Stevens

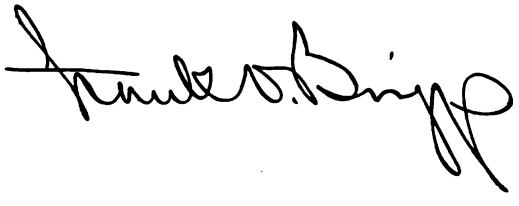
John Finley Stevens was born at West Gardiner, Me., April 25, 1853, the son of John and Harriet (French) Stevens, of early New England ancestry. He received a general and technical education in his native town and in Minneapolis, Minn., where he settled in his youth. He was appointed assistant engineer by the Minneapolis city government in 1874, when but 20 years of age, and two years later filled the position of chief engineer of the Sabine Pass and Northwestern Railway. In 1879 he became assistant engineer of the Denver and Rio Grande Railway, acting in a like capacity for the Chicago, Milwaukee and St. Paul Railway during 1880-82. He returned to this position in 1886, after having spent the interim as division engineer on the Canadian Pacific Railway, but a year later he was made principal assistant engineer of the Duluth, South Shore and Atlantic Railway. In 1889 he served as assistant engineer to the Spokane Falls and Northern; and during 1889-93 as principal engineer of the Great Northern Railway, being advanced to assistant chief engineer of the same road in 1893 and to chief engineer in 1895. After spending a year in railway contracting he resumed the duties of the last named office, and was general manager of the system during 1902-3. Transferring his services to the Chicago, Rock Island and Pacific Railway he acted as chief engineer in 1903-4, and as vice-president of the company in 1904-5.

John F. Stevens

This remarkably variegated experience could not but produce an engineer of great practical accomplishments, but Mr. Stevens is more than that. In the words of James J. Hill, commenting upon his survey of the Great Northern road to the Pacific coast, a monumental task involving apparently unsurmountable obstacles, "his work is the acme of engineering pluck and ability." It is this fact that caused him to be chosen to direct the most gigantic undertaking the world has yet seen—the Panama canal. He became chief engineer of the Isthmian Canal Commission July 1, 1905. The appropriateness of this appointment was the cause of much gratification, and the organization which he effected, as well as the methods he employed, aroused the most favorable comment. In February 1907, he became chairman of the Isthmian Canal Commission and his resignation, two months after he became the commission's head, was received with much regret, while the result of his 20 months' work remains as an important factor in the ultimate success of the enterprise.

He left his post April 1, 1907, and on August 1 following was elected vice-president of the New York, New Haven and Hartford Railroad, in charge of operation, with headquarters at New York. The development of the Great West once more engaged his attention, however, and particularly the opening up of the state of Oregon by a system of railroads. The new Oregon Trunk Line having been financed by James J. Hill, he accepted the presidency of the new system, September 7, 1909, having resigned his former office on June 1. Extending from the Columbia river to Central Oregon, with a net-work of branches through this comparatively neglected territory, the new line is the great Hill system. He remained in this position until April 1, 1911.

Mr. Stevens is a member of the American Society of Civil Engineers, a member of the Wheaton Golf, Illinois Athletic, and Glen View clubs of Chicago; and the Minnesota Club, of St. Paul. He is married and has three sons.



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Rufus L. Patterson

Rufus Lenoir Patterson

Rufus Lenoir Patterson was born at Salem, N. C., June 11, 1872, the son of Colonel Rufus Lenoir and Mary (Fries) Patterson, and the grandson of General Samuel Finley and Caroline (Jones) Patterson. Among his ancestors are some of the most noted families of the old commonwealths of Virginia and the Carolinas, many of the members of his family having been prominent in the public affairs of their native states.

The early education of the young man was obtained in the Moravian Boys' School and the Graded School of Winston-Salem, N. C., whence he was graduated in 1889. He then entered the University of North Carolina to take the scientific course, but after a year he left college to enter business. He first entered the employ of the Kerr Bag Manufacturing Company, at Concord, N. C., as assistant to the general manager, William H. Kerr, but after serving the company in this capacity for a period of two years he determined to broaden and perfect his knowledge of mechanics, and with this object in view he went to England, where he made a careful, systematic and thorough study of the subject. In 1893 he returned to the United States and became associated with the Golden Belt Bag Company, at Durham, N. C., in the capacity of mechanical engineer of the company.

Mr. Patterson had always been of an inventive turn of mind and he was now in a position to devote much of his leisure time to planning and perfecting improved types of labor-saving machinery. His inventive faculties turned in the direction of devices for simplifying the manufacture of tobacco and he has patented a great number of machines for use in that industry. One of his inventions was a machine for automatically weighing, packing and stamping granulated tobacco, and in 1894 he organized the Automatic Packing and Labeling Company to manufacture and market this machine—a venture which proved a complete success. This led to his becoming associated in 1898 with the American Tobacco Company as manager of the department of machinery; and so capably did he conduct the affairs under his charge that within two years he was made a director and secretary of the company and in 1901 was elected to the office of third vice-president. In addition to being a director of the American Tobacco Company, Mr. Patterson is president of the International Cigar Machinery Company, the American Machine and Foundry Company, the Automatic Packing and Labeling Company, and the Standard Tobacco Stemmer Company.

Outdoor sports constitute Mr. Patterson's chief diversion from the cares of business life and his principal recreation. He is particularly fond of saddle horses and has owned some of the best blooded stock in the country. His clubs are the Calumet, Riding, Turf and Field, New York Yacht, Rockaway Hunting, Ardsley, and the Automobile Club of America. On November 21, 1895, he was married to Miss Margaret Warren Morehead, daughter of Eugene Morehead, of Durham, N. C., and a granddaughter of Hon. John M. Morehead, Governor of North Carolina from 1841-1845. They have one son, Morehead, and one daughter, Lucy Lathrop.

Frank Obadiah Briggs

Frank Obadiah Briggs was born at Concord, N. H., August 17, 1851, the son of James Frankland and Roxanna (Smith) Briggs. While still a child his father came to this country from England with his parents and settled in New Hampshire, where he studied law, was admitted to the bar, and became a successful practising attorney. From 1877 to 1883 he also represented the second district in Congress. Roxanna (Smith) Briggs was a native of New Hampton and was descended from an old New England family.

The early education of Frank O. Briggs was obtained in the public schools of Hillsboro, N. H. He then studied at Henniker (N. H.) Academy and the Francestown (N. H.) Academy, and from 1866 to 1868 attended Phillips-Exeter Academy. At the latter institution he was preparing to enter Harvard, but before his course had been completed he was appointed to the United States Military Academy at West Point, where he graduated in the class of 1872. He was then appointed lieutenant in the regular army and assigned to the second United States Infantry, serving with this regiment for five years. During the Hayes-Tilden disputed Presidential election of 1876 he was stationed in Columbia, S. C., where he was ordered to guard the State Capitol against the two forces then contending for the governorship of the State—the Democrats under Wade Hampton, and the Republicans under Daniel H. Chamberlain.

Mr. Briggs resigned from the army in 1877 and then became connected with the firm of John A. Roebling's Sons Company, at Trenton, N. J., which city has since remained his home. He first entered the engineering department of the business, but by industrious application to his duties gradually gained the entire confidence of the company so that in 1883 he was made assistant treasurer, a position he has continued to occupy to the present time.

In 1884 Mr. Briggs became a member of the Trenton board of education, holding this posi-

tion until 1892. On April 11, 1899, he was elected mayor of Trenton, as the reform candidate, by a majority of 816 votes over Joseph A. Corey, Democrat. In 1901 he also became a member of the New Jersey State board of education by appointment of Governor Voorhees, and upon the expiration of his term as mayor of Trenton, January 1, 1902, was appointed State treasurer *ad interim* to fill out the unexpired term of George B. Swain, of Newark, who had died December 23, 1901. In the following month, on February 11, 1902, he was elected to the treasurership for the full term of three years, and in 1905 was re-elected, holding the office throughout the administrations of Governors Murphy and Stokes.

In 1904 Mr. Briggs was elected chairman of the Republican State committee and because of his ability and industry was largely responsible for the Republican success in the campaign of that year. In 1907 the term of United States Senator John F. Dryden expired and Mr. Briggs ardently supported Senator Dryden for re-election for the term ending March 3, 1913, but when the latter definitely withdrew Mr. Briggs became a candidate and on February 5, 1907, was elected, taking his seat in the first session of the Sixtieth Congress.

Beside his duties as Senator and as an officer of the Roebling Company, Mr. Briggs has also found time to become interested in several other enterprises—financial as well as industrial. He is secretary of the New Jersey Wire Cloth Company, secretary and treasurer of the Porter Screen Manufacturing Company, first vice-president of the Norfolk and Portsmouth Traction Company, and a director in the Trenton Savings Fund Society, the Windsor Trust Company of New York, and the Hudson and Manhattan Railroad Company.

Senator Briggs is a member of the Union League, the Lawyers' and the Grolier Clubs, of New York, the Defobs Club of Chicago, the Lotus Club of Trenton, the Bibliophile Society of Boston, the United Service Club of Philadelphia, the American Historical Society, the New Jersey Historical Society, and the American Forestry Association. On September 23, 1874, he was married to Emily A., daughter of Thomas S. Allison, and to them one son has been born, Frankland Briggs.

James Delaney Platt

James Delaney Platt was born at Schroon Lake, N. Y., October 19, 1838, one of the 15 children of Daniel Platt, a farmer, and Caroline Wyman. His ancestors were of an ancient English family, the first representative of which to settle in America was Richard Platt, who same to this country in 1638.

The young man received his early education in the public schools at Schroon Lake, N. Y., Fairfax, Vt., and Fort Edward, N. Y., and for the next five years worked on his father's farm during the summers and taught school during the winters. In 1860 he went to Toledo, Ohio, where he was engaged until the Civil War broke out, when he immediately volunteered for service in the Union Army. During that stupendous struggle he participated in many of the engagements under General Sherman from Chattanooga to the Atlantic Coast, and through the Carolinas, taking part in the famous march to the sea, at which time he held the rank of lieutenant-colonel.

Upon his return from the war he became associated in business with Mr. E. E. Barney of Dayton, Ohio, and was given an interest in the Barney-Smith Car Works. By intelligent application to his duties he gradually rose from one position to another until he became president, which office he resigned in 1908. He purchased the business of the Stillwell-Bierce Manufacturing Company, reorganized it, and then incorporated it under the name of the Platt Iron Works, of which he remained the sole owner until 1908 when he disposed of his interests. He was also associated with Mr. E. J. Barney in conducting the Dayton Manufacturing Company. In the commercial world he is regarded as a man of rare executive ability and he has been largely instrumental in building up industries, the products of which are favorably known throughout the world.

In politics Mr. Platt has most generally supported the candidates of the Republican party, but is well known and highly respected for his independence in politcal matters, always throwing the great weight of his influence to the aid of the person he thought best fitted for office, without regard to his political creed or affiliations. Mr. Platt enjoys traveling and in addition to having spent considerable time abroad, he has covered quite thoroughly nearly every section of the United States. He takes keen pleasure in all out door sports, especially hunting and golfing, and he is also fond of club life, being a member of the Dayton City Club, the Dayton Country Club, the New York Whist Club and a life member of the American Geographical Society.

On December 11, 1866, Mr. Platt was married at Dayton, Ohio, to Mary Louise Barney, and they have two sons and two daughters: Edwin F., who was married to Alice Stoddard; James D., Jr., who married Anne Evans; Bertha, the wife of E. M. Thacker; and Pauline, the wife of Frederick W. Okie. Mr. Platt has a beautiful home on First Street, Dayton, and has expended much money and exercised careful discrimination in its furnishings and decorations. Many handsome paintings by Corot and other well-known artists adorn the walls and he also has a carefully selected library which contains rare and limited editions of many of the standard authors. Mr. Platt also has a fine country place—The Old Homestead—at Schroon Lake, N. Y.

J D Pratt

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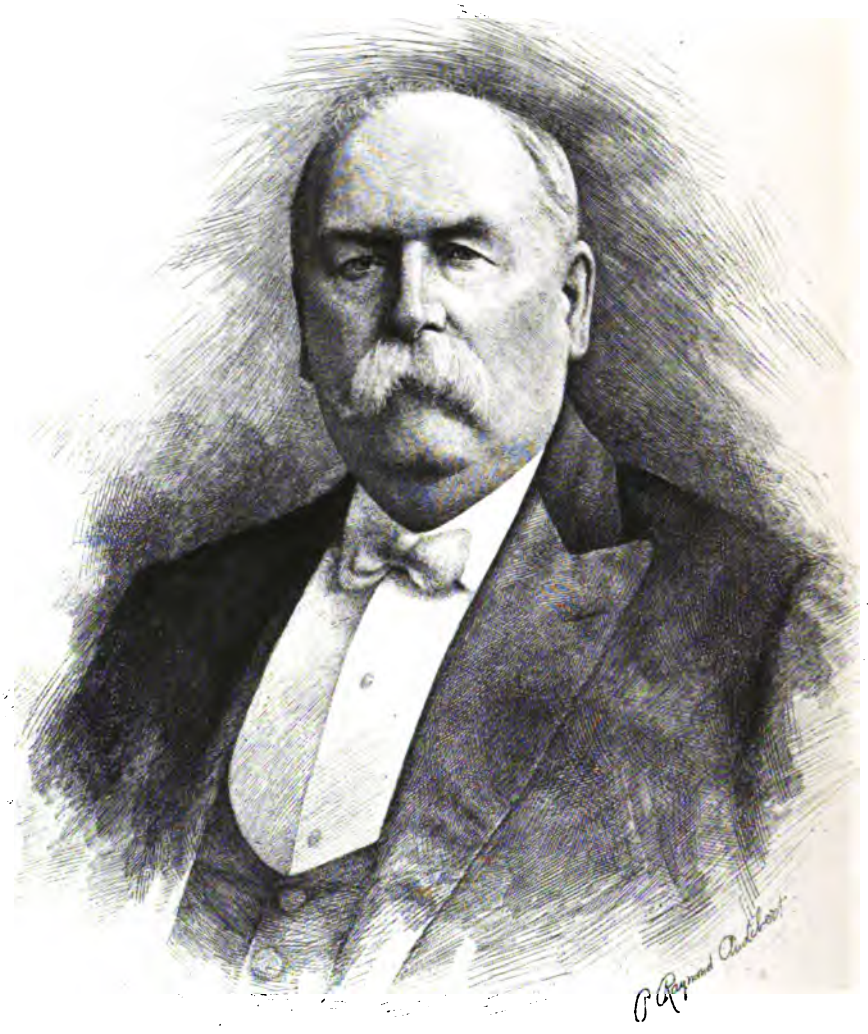

Edward Kerr

Edward Kerr

Edward Kerr was born at Sanquhar, Dumfrieshire, Scotland, August 12, 1842, one of the seven children of William and Grace Whigham Kerr. He received his education in the parish school of Sanquhar and then engaged in business. His father was a carpet weaver but the young man determined upon an entirely different career for himself.

In 1876, at the age of 34, Mr. Kerr came to this country and shortly after his arrival entered the iron business. From 1881 to 1883 he was connected with the Reading Iron Company, of Reading, Pa., manufacturers of steam forgings, but in the latter year he severed his connection with this company to enter the employ of the Black Diamond Steel Company. In 1891, after eight years of arduous labor in the service of this company, he decided to go into business for himself and incorporated the Lawrenceville Bronze Company, acting as president of the company from its inception. In addition to a general line of bronze and copper castings, the company makes a specialty of railroad, rolling-mill, and blast furnace supplies, and under Mr. Kerr's careful and judicious guidance the business has prospered to a marvelous degree.

In the course of his career Mr. Kerr has seen much of the world, his most extensive travels having taken place in Great Britain, Canada and the United States. The recreations in which he takes most delight are fishing and hunting but he is also fond of social life and belongs to the Masonic Fraternity, the Odd Fellows and the Workman and Heptosophs. He is also a member of the Pittsburg Railway Club and the Manufacturers Association. He is affiliated with the Presbyterian Church.

On March 23, 1865, Mr. Kerr was married at Penpont, Scotland, to Miss Mary Lindsay, and they have three children: Elizabeth Mitchell Kerr (b. Glasgow, 1866); Grace Whigman Kerr (b. 1867), and James W. L. Kerr (b. 1869). Of the children two have been married; James on September 13, 1893, and Grace on July 21, 1898.

James Dickinson Smith

James Dickinson Smith was born at Exeter, N. H., November 24, 1829, the son of the Rev. Dr. John Smith, a Congregational clergyman, and Esther Mary (Woodruff) Smith. He received his elementary education in the public schools of Exeter, N. H., and later attended Wilton Academy, Wilton, Conn. Upon leaving school the young man for a time was employed as a clerk in a dry goods store at Exeter, but soon thereafter went to New York, where he entered the employ of the well-known dry goods house of Hoyt, Sprague and Company. Severing his connection with the latter firm he went to Louisville, Ky., there becoming a partner in the firm of James Low and Company, later returning to New York as their representative in that city. Shortly after his arrival in New York he established the banking and stock brokerage house of Jameson, Smith and Cotting, which subsequently became James D. Smith and Company, with offices at 71 Broadway, and of which Mr. Smith remained the head until his death in 1909. In 1868 he became a member of the New York Stock Exchange, of which he was president in 1885-86, and was active in all affairs relating to Wall Street until his last illness. He was a member of the New York Produce Exchange and the Mining Exchange, and was also connected with numerous mining, real estate and other corporations. Among these were the Quicksilver Mining Company, of which he was treasurer and director, the Associates Land Company, of which he was a director, the New England Land Company, of which he was president and director, the Smith's Cove Land Company, of which he was president and director, and the Woodlawn Cemetery, of which he was president and director.

Commodore Smith was closely identified with the affairs of Stamford, Conn., where he had resided for almost 50 years. He was an incorporator of the Stamford Hospital and from its inception was an officer (president) and director and a most generous contributor, and his name was connected with every movement of a patriotic or philanthropic nature projected in the city. He was one of the founders of the Stamford Coach Company; for several years was town councilman at large; and from 1894 to 1897 was president of the Stamford City Council. But Mr. Smith's interest in political affairs was not purely local for he was prominently and favorably known throughout the state. He represented Stamford in the state legislature in 1881 and in 1882 he was appointed state treasurer to fill out the unexpired term of D. P. Nichols, of Derby, on the death of the latter. During his term as treasurer Mr. Smith refunded the state debt of $500,000.

Commodore Smith's popularity, however, undoubtedly sprang from his long connection with the great American sport, yachting. He was a member of the New York Yacht Club for more than 36 years, his membership dating from March 27, 1873, and during all these years he was prominently and honorably associated with the developments and triumphs of American yachting. In 1880 he became rear-commodore

James D. Smith

the New River Collieries Company, of West Virginia; vice-president of the American Congo Company, a director of the Nevada Consolidated Copper Company, of the Guggenheim Exploration Company, of the Intercontinental Rubber Company, of the Utah Copper Company, and of Camp Bird, Limited, acting as consulting engineer and assistant consulting engineer for the last two respectively. Mr. Beatty is a member of the American Institute of Mining Engineers. He belongs to the Society of Colonial Wars, the Sons of the American Revolution, the Zeta Psi fraternity, and the Metropolitan, University, Lawyers', and Engineers' clubs of New York City, the Denver and University clubs of Denver, and the Alta Club of Salt Lake City. He was married at Denver, Col., in 1900, to Grace Madelin, daughter of Alfred Rickard, of London, England, by whom he has two children: Ninette and Alfred Chester Beatty, Jr.

Russell Sage

Russell Sage was born at Shenandoah, Verona Township. Oneida County, New York, August 4, 1816, and died at Lawrence Beach, Long Island. July 22, 1906. He was the son of Elisha and Prudence (Risley) Sage, and was descended from ancestors who had taken a prominent part in the early history of the country from colonial times. In Whittemore's 'History of Middlesex County, Conn.,' a record in detail is given of «The Sages in the Revolution» from which it appears that nearly every member of the family of fighting age who was physically qualified was enrolled in the patriot army, serving at Bunker Hill, at Long Island, with Arnold at Quebec, at West Point, etc. Others rendered valuable service on the sea. The first member of the Sage family in New England was David Sage, who with his widowed mother settled in 1652 at Middletown, Conn. (then known by its Indian name Mattabesett) and was known as one of the most thrifty farmers in the town. Russell Sage's father, Elisha Sage, served throughout the War of 1812 after which he determined to settle in the west but while in the central part of New York on his way his son Russell was born and he therefore decided to abandon the journey and make his home in the little township of Verona where he later became a prosperous farmer. Mrs. Russell Sage (Margaret Olivia Slocum) is also descended from a family equally as patriotic as that of her husband. Anthony Slocum was one of the 46 «first and ancient purchasers» in 1637 of the territory of Cohannet which was incorporated March 3, 1639, with the name of Taunton in New Plymouth and he held various public offices such as supervisor of highways, etc. Several of his descendants were persecuted because they were members of the Society of Friends and they therefore moved to Rhode Island. One of these descendants, Joseph Slocum, married Susanna, daughter of Governor John Wanton, for many years governor of Rhode Island and whose family furnished several governors to that state. Another ancestor of Mrs. Sage was Captain Myles Standish who came to America on the Mayflower and was a tower of strength to the struggling colony.

Russell Sage virtually knew no childhood and received his regular education in a day school. His teacher said he was the best boy in the school. At a very early age he began work in his brother Henry's store at Troy, earning $4 per month, but so ambitious was the lad that he attended night school and paid his teacher $1.50 every month. He soon learned bookkeeping and the more intricate problems of arithmetic; also studying historical works and becoming familiar with current events by reading the papers. At the end of a year his wages were increased $2 per month and when he was 13 years of age his salary was $4 per week, of which he saved a large part. With $200 of his savings he purchased two vacant lots while still a clerk in his brother's store and also began in a small way to trade in horses, on every deal making more money with which he bought more land. With some of the profits he bought a sloop which he navigated from Troy to New York, handling horses on commission and returning with provisions. The profits of this trip were $700 with which he entered into partnership in a new store with his brother Elisha M., two years later buying him out. At that time he handled liquors and cigars, though he never used either, but in 1839 a temperance wave swept the country and he was forced to do away with the liquor end of the business. As this reduced the profits he sold the business at a substantial price and at the age of 22 found himself possessed of about $25,000 in cash, several plots of land and his staunch sloops. Mr. Sage then entered the wholesale commission business with connections in New York and in a short time the firm controlled several branches of trade in Albany and Troy. At this age Mr. Sage paid the mortgage on his father's farm in Shenandoah.

Mr. Sage began his political career at an early age, in 1845 being elected to the common council of Troy and later serving for seven years as treasurer of Rensselaer County. In 1847 he became acquainted with General Zachary Taylor and at the national congress of the Whig party in 1848 to which he was a delegate Mr. Sage took a prominent part in nominating General Taylor for the Presidency. It was at his suggestion also that Millard Fillmore was nominated for the second office. Thus Mr. Sage had much influence with the President and when the latter affronted Senator Seward of New York by disregarding his nomination for federal offices Mr. Sage undertook to convince the President that his prejudices against Sew-

ard's selections were unfounded and in this mission he was successful. In 1850 Mr. Sage was nominated for Congress by the Whig party of Troy but internal dissensions in the party at that time encompassed his defeat. In 1852, however, he was elected by a small majority and his work in Congress created such a favorable impression that he was re-elected in 1854 by the unprecedented majority of 7,000 votes. While in Congress his financial ability was recognized by his appointment to the Ways and Means Committee of the House and he rendered very able service in this connection. He was also a member of the Invalids Pension Committee, took a leading part in the election of Nathaniel P. Banks to the Speakership, and was largely instrumental in securing the appointment of a committee to investigate the conditions of Washington's estate at Mount Vernon, the report of which committee led to the purchase of the estate and the formation of the Mount Vernon Association to care for it. He supported the Kansas-Nebraska Bill and opposed the repeal of the Missouri Compromise, on August 6, 1856, making a carefully prepared speech in support of his views, the speech covering 20 pages of the 'Congressional Globe.'

At the end of his second term in Congress Mr. Sage determined to abandon politics and to devote his energies to his business enterprises which even then were assuming large proportions. He had already embarked in the transportation business, while a member of the Troy council taking a leading part in the sale of the Troy and Schenectady Railroad, then owned by the city and now a part of the New York Central system. He had also advanced considerable money to the LaCrosse Railroad and in the panic of 1857 he was forced to advance still larger amounts in order to protect himself, this finally leading to his ownership of the road which ultimately developed into the Chicago, Milwaukee and St. Paul. This was the beginning of a long career in connection with the transportation interests of the country during which he became president of 20 or more corporations, among those with which he was officially connected at various times being the Union Pacific; Missouri Pacific; Chicago, Milwaukee and St. Paul; Iowa Central; Wabash, Texas and Pacific; St. Louis, Iron Mountain and Southern; Troy and Bennington; Delaware, Lackawanna and Western; Troy and Boston; Manhattan Elevated, of which he was one of the largest stockholders; and others. He was also active in the affairs of the Pacific Mail Steamship Company; the Western Union Telegraph Company; the International Ocean Telegraph and American Telegraph Cable Companies; the Standard Gas Light Company; the Mercantile Trust Company; the Importers' and Traders' National Bank; and the Fifth Avenue Bank. At one time he stated that he was connected with more than 20,000 miles of railroad and with 27 different corporations.

In 1863 Mr. Sage removed from Troy to New York to devote himself to his railroad enterprises and to operate in stocks, opening an office in William Street. He soon enlarged his field of operations until it included every stock listed on the exchange; he originated the system of the sale of privileges; transacted a large business in «puts» and «calls»; and was the largest operator on the «Street» in cash loans, which were subject to call for payment at any time.

On December 4, 1891, an insane crank entered Mr. Sage's office at 71 Broadway carrying a bag of dynamite and threatened that unless he were given $1,200,000 instantly he would blow up the building. Mr. Sage retreated before the madman but the latter threw the dynamite upon the floor and the explosion killed himself and a clerk, injured several others and wrecked the office, Mr. Sage being severely wounded. One of the injured was William R. Laidlaw who had called upon some brokerage business and he afterward brought suit against Mr. Sage, claiming that the latter had seized him by the shoulder and swung him around so that his body would shield Mr. Sage. At the first trial Laidlaw was awarded $25,000 damages but Mr. Sage appealed; at the second trial the jury disagreed; and at the third trial Laidlaw was awarded $43,000 but upon appeal the Court of Appeals reversed the judgment.

Mr. Sage was twice married; first to Maria Winne, daughter of Moses L. Winne, of Troy, N. Y., to whom he was married in 1841. She died in 1867 and two years later he was married to Margaret Olivia Slocum, daughter of Hon. Joseph Slocum, of Syracuse, N. Y.

Mr. Sage was a man of strong individuality; he was a hard worker and found great pleasure in performing his work well. He was honest and straightforward in all his dealings; was very unassuming; and though he cared little for luxuries and had few wants he willingly paid for those he enjoyed. He lived in a good house and maintained a stable of fine horses which he was very fond of driving. While he was surprisingly economical considering his wealth, his frugality has been greatly exaggerated. It was chiefly his horror of extravagance in any form that made his name the synonym for economy in the midst of riches but he believed in making money honestly rather than in spending ill-gotten wealth generously, and undoubtedly his example of a wealthy man living simply was of far more genuine value to the youth of the country than if he had lived in the manner of some recent conspicuous men of wealth. He was faithful to his word, his friends, his family and to every trust, and during all his business career his uprightness was never denied even by his severest critics, all testifying to the irreproachable character of his every action.

Upon Mr. Sage's death the responsibility of managing his immense estate fell upon the shoulders of his wife who in every way has justified the confidence reposed in her by Mr. Sage. Mrs. Sage's benefactions have always been unstinted and she has taken especial pride in promoting the interests of organizations with which she is connected, prominent among which are the Women's Christian Union, the Woman's Hospital, the Woman's Exchange, Home and Foreign Missions, the Emma Willard Association, the Emma Willard School (successor to Troy Seminary), beside other local organizations. Among her best known gifts are those

of $1,000,000 to the Emma Willard School of Troy and a similar sum to the Rensselaer Polytechnic Institute; $115,000 to the public school at Sag Harbor, L. I.; $350,000 to the Young Men's Christian Association of New York; $150,000 to the American Seaman's Friend Society; $150,000 to the Northfield (Mass.) Seminary; $300,000 to the Sage Institue of Pathology of the City Hospital on Blackwell's Island; $250,000 to a Home for Indigent Women; $100,000 to Syracuse University; and $10,000,000 to constitute a fund known as the Russell Sage Foundation for Social Betterment. She has also presented memorial windows to her parents and to her old pastor in the church where she received her baptismal name and her early religious instruction—the First Presbyterian Church of Syracuse, N. Y. These of course are only the gifts that are well known and constitute but a small part of her generous contributions toward worthy objects, very few of which she mentions. She has always chosen wisely in bestowing her gifts and endeavors to place them where the greatest good can be accomplished. Her whole life has been devoted to promoting the happiness of others; the cause of humanity is under heavy obligations to women of her character; and it need hardly be said that "thousands will rise up to call her blessed."

David Halliday Moffat

David Halliday Moffat was born at Washingtonville, Orange County, N. Y., in 1839 and died in New York City, March 18, 1911. He began life as messenger boy in a New York bank and when he died his wealth was estimated at $40,000,000. He was only 12 years old when he began to earn his own living. He left his home in the little town and arrived in New York, practically penniless, but he had a dream at that time that he would ultimately become a big banker. He began work in the New York National Exchange Bank, where he earned $5 a week. He remained four years and had given such satisfaction he had been promoted to assistant teller. In the meantime an older brother had gone to Iowa, and David joined him there, finding a position in a bank in Des Moines. It was while there Moffat met B. F. Allen, who had opened a bank in Omaha, and the young man accepted the position of cashier. Three years afterward the bank was liquidated, but through the aid of Moffat every claim was paid in full.

In 1860 he got the gold fever, bought a team of mules and a "prairie schooner," and joined a wagon train that was going across the plains to the next Eldorado. It was before the day of railroads, and they experienced all the difficulties that threatened pioneers on the highway lined with the graves of those who had died from exposure, starvation and the attacks of Indians. They arrived in Denver, when it was little more than a camp of gold prospectors located on the banks of the Platte, and there he opened with C. C. Woolworth of New York, a book and stationery store. The town built rapidly and in six years they had made a tidy sum out of the venture. He had done private banking then and in 1866 became instrumental in founding the First National Bank of Denver, of which he became cashier; fifteen years later he was elected its president. He had been closely identified with the bank as its head ever since and under his administration it had become known as one of the strongest and most conservative national banks in the West.

Mr. Moffat had been prominently connected with all the leading railroad enterprises of Colorado. He was one of the promoters of the Denver and Rio Grande Railroad and was elected its president in 1884. In 1869, with Governor Evans, he built the Denver Pacific from Cheyenne to Denver, without which road Denver would have lost its commercial supremacy and most of its business would have centered at Cheyenne. He was instrumental in organizing the Denver and South Park Railroad to Leadville, at one time said to be the best paying road in the world, and he also furnished a large share of the capital used to build the Denver and New Orleans, which ultimately gave Denver a through line to that city. He also helped construct the Boulder Valley and the Florence and Cripple Creek.

Another of his large interests was mining. At one time he owned more mines in Leadville than any other individual or company and he owned the biggest mines in Creede, Aspen, and Telluride. He bought the first mine in Cripple Creek, the Victor, for $65,000, of which $5,000 was cash and the rest payable in a year. At the end of a year he had taken $500,000 out of the mine, and two years later he sold it to a French Company for $3,000,000 after he had taken out nearly that amount himself.

In 1861 he married Fannie A. Buckhout, of Mechanicsburg, N. Y. Only one daughter is now living: Mrs. J. A. McClurg of Denver.

Walther Lüttgen

Walther Lüttgen was born at Solingen, Germany, January 7, 1839, one of the eight children of Carl August and Johanne (Struller) Lüttgen. His father was a landed proprietor in Germany, but in 1854 he came to the United States with his wife and family and settled in New York. At this time Walther was 15 years of age and had received a good education in the public and private schools of Germany, but when the family settled in New York the boy was again sent to public school that he might more thoroughly learn the language and become better acquainted with American customs and usages before starting in upon a commercial career.

In 1855 the young man entered the employ of a firm of custom house brokers with whom he remained until 1857 when he left his position to accept employment with a hardware importing house. Again after a period of two years he resigned his position to enter the employ of August Belmont and Company, with whom he has been ever since, gradually working his way up from clerk to confidential attorney, and in 1880 being rewarded for his long years of faithful service by admission as a partner in the firm. He enjoys the unusual distinction of having been partner of three generations of men of the same name: the elder August Belmont, his son August Belmont, the present head of the firm, and the latter's son, August Belmont, Jr., also now a member of the firm. Mr. Lüttgen has for over 25 years been a director of the Illinois Central Railroad Company, and is also a director of the Rapid Transit Subway Construction Company in the initial work of which he has been active.

Mr. Lüttgen is a member of the New York Athletic, the Down Town, the New York Yacht and the Columbia Yacht clubs of New York, and the Metropolitan Museum of Art, the Museum of Natural History, the Zoological Gardens, and many other art and charitable institutions. He was as a young man a member of the 23d regiment of the New York National Guard, and has also held several minor political offices in suburban communities. On May 23, 1866, he was married at Brooklyn, N. Y., to Amelia Victoria Bremeyer, and to them have been born two children: Florence Amelia and Gertrude Marion (deceased).

Theodore Roosevelt

Theodore Roosevelt, 26th President of the United States, was born at New York, October 27, 1858. He was educated privately and at Harvard, from which he was graduated in 1880; then for a year traveled in Europe, which he later at intervals revisited; and in 1881 published his first book, 'The Naval War of 1812,' characterized, like his subsequent works, by creditable research, general accuracy, and vigorous statement. He came into politics as a champion of civil-service principles. In the autumn of 1881 he was elected to the state assembly of New York from the 21st district, and he served in that body continuously until 1884. He introduced into the assembly the first civil service bill, passed in 1883. In 1884 he was chairman of the New York delegation to the national Republican convention. He was nominated in 1886 as an independent candidate for the New York mayoralty, but though he received Republican endorsement, was defeated by Abram S. Hewitt, candidate of the United Democracy, who was elected by about 22,000 plurality. In May, 1889, he was made by President Harrison a member of the United States civil service commission, in which post he continued until May, 1895. During this six years' incumbency he strictly endeavored to apply the test of merit to all executive positions, with the result that the commission assumed a position of importance it has never since lost, and civil service law gained a new vitality. At the beginning of his term of service, 14,000, at its close, 40,000, employees held their positions under the rules of the civil service.

From the civil service commission he resigned to become president of the board of New York police commissioners during the administration of Mayor Strong. At once he undertook the task of thorough reorganization, among the principles insisted on by him being an impartial application of the civil service idea to appointments to the police force and promotions in it. By this vigorous enforcement of laws and ordinances he gave unwonted effectiveness to the office. This post he relinquished in 1897 to become assistant secretary of the navy to Secretary John D. Long, in the first administration of President McKinley. Quickly acquiring the extensive detailed knowledge necessary to his post, he began to urge that preparation of the navy for warfare which contributed so signally to the triumph of American arms in the Spanish-American war. He called for two appropriations of respectively $800,000 and $500,000 for ammunition for naval target practice, and though this was at the time deemed extravagant, it was later amply justified by the skill of American gunners as shown at Manila and Santiago.

On May 6, 1898, he resigned his assistant secretaryship to enter the army. His experience

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in 1884-8 in the 8th regiment of the New York national guard, in which he had for a time served as captain, furnished some basis for his military career. He joined Leonard Wood, captain and surgeon, of the United States army (now chief of staff) in recruiting the 1st United States volunteer cavalry, of which he became lieutenant-colonel, with Wood as colonel. Notwithstanding he was second in command, his regiment, composed to a large extent of cowboys and western hunters, was popularly known as «Roosevelt's Rough Riders.» On July 1, 1898, he led the victorious charge of the «Rough Riders» and the 9th cavalry up San Juan hill, on July 11 was promoted colonel, and in September was mustered out.

On September 27 he was nominated as Republican candidate for the governorship of New York, obtaining 753 ballots to 218 for Governor F. S. Black. He entered on an active campaign and was elected by a plurality of 18,079 over his Democratic opponent, Judge Augustus Van Wyck. He at first declined to sanction the use of his name in connection with the vice-presidency in McKinley's second campaign, but ultimately yielded, and was nominated by acclamation at the national Republican convention at Philadelphia, June 21, 1909. He immediately set out on an aggressive speaking tour, extending to the far West. The assassination of President McKinley placed him in the presidential chair. On September 14, 1901, the oath of office was administered by United States District Judge John R. Hazel. Upon his accession he announced that he would unbrokenly continue the policy of McKinley, whose cabinet he retained. Probably the most important and historic occurrence during his first administration was the definite decision to construct an isthmian canal at Panama, the removal of the obstacles in the way of building the canal, and the actual beginning of the gigantic undertaking, involving an expenditure of $300,000,000. The question of a canal connecting the Atlantic and Pacific had been under consideration for over 150 years. The United States government first took up the subject in 1850, and after that time numerous commissions were appointed to determine the most satisfactory route by actual surveys. It was finally decided to build a lock canal 46½ miles long across the isthmus of Panama, after the practicability of such an undertaking had been assured by an international board of French, English, German, Russian, and American engineers, and Congress authorized the President to acquire the rights, franchises, concessions, unfinished work, plants, and other property owned by the Panama Canal Company of France, at a cost not to exceed $40,000,000, to be paid, provided a satisfactory title could be obtained and then only after a satisfactory right of way should have been obtained by treaty with Colombia. Attorney-general Knox went to Paris to ascertain the legal status of the French canal company and its rights to make the proper transfer. Meanwhile the terms of the Clayton-Bulwer treaty between the United States and Great Britain respecting such a canal having proved a hindrance, a new agreement was entered into—the second Hay-Pauncefote treaty, which was signed November 18, 1901. A treaty was then drawn up between the United States and Colombia respecting the construction of the canal, and was signed at Washington in January, 1903. The Colombian congress, however, relying on the limitation of the French contract, demanded a heavy cash payment, and finally in the following September rejected the treaty. Less than two months later a revolt broke out in the state of Panama, Colombia, and on November 3, 1903, Panama declared its independence, at the same time signifying its willingness to negotiate a treaty similar to the one rejected by Colombia. On November 18, 1903, such a treaty was signed at Washington by Secretary Hay, and Panama's newly appointed minister plenipotentiary, by which the United States recognized Panama's independence, and for the purpose of protecting her own interests in the great undertaking, guaranteed its maintenance. Following the ratification of this treaty, the President appointed an isthmian canal commission to take charge of the construction of the canal and to govern the canal zone. On April 22, 1904, the property rights of the Panama Canal Company of France were duly transferred to the United States, and on May 9 $40,000,000 was paid over by the United States. The engineering problems connected with such a gigantic undertaking were so great that considerable difficulty was experienced in securing the services of a chief engineer, but that difficulty was happily solved by placing the scientific work in charge of a regular engineer of the United States army, Colonel George W. Goethals. Although the completion is still some years in the future, it is not too much to say that the name of Roosevelt will always be associated with this great beneficent highway of maritime commerce. The administration was accused of having advance knowledge of the Panama uprising and was criticised for the hurriedness in recognizing her independence. It should be noted in this connection that on January 9, 1909, three treaties were signed, one between the United States and Panama, one between the United States and Colombia, and one between Panama and Colombia, by which all outstanding difficulties arising from the Panama revolution were adjusted in a way honorable and satisfactory to each of the contracting parties.

One of President Roosevelt's first notable leaps beyond precedent was calling a halt to the great anthracite coal strike of 1902, and at the suggestion of Secretary of State Root appointing a commission consisting of Judge George Gray, Carroll D. Wright, Edgar E. Clark, Gen. John M. Wilson, Bishop John L. Spalding, Thomas H. Watkins and Edward W. Parker, to investigate both sides of the controversy and report upon the whole situation with findings which he pledged both sides to accept as a just basis for a peaceful continuation of the work. The judgment of that commission constituted the basis of operations in the vast anthracite region until the spring of 1909, when a new agreement took place. The Interparliamentary Union at its meeting in St. Louis, Mo., in September, 1904, in connection with the Louisiana exposition, addressed a unanimous request to President Roosevelt to call a second peace conference at The Hague, and in October, 1904, he

issued invitations to all powers signatory to the first Hague convention to send delegates to a second conference, suggesting that it be held at The Hague. Favorable replies were received but the Russian government proposed that the meeting be deferred until the conclusion of the war with Japan. The meeting of the second international peace congress took place at The Hague, June 15, 1907.

The Cuban situation was also inherited from President McKinley's administration. After the conclusion of the Spanish-American war the island of Cuba was under the military control of the United States for three years, being ruled by military governors appointed by the President. On May 20, 1902, the government and control of the island were turned over to the president, Thomas Estrada Palma and the congress of the newly inaugurated republic, but before long internal dissensions arose and the situation became so alarming that President Palma called upon Roosevelt to interfere under the conditions of the Platt amendment to the treaty of Paris, which gives the United States the right to intervene for the preservation of Cuban independence and the maintenance of law and order. Charles E. Magoon was made provisional governor and took entire charge of the administration, remaining there until January 28, 1909, when the rehabilitated republic was turned over to a new administration under the presidency of General Gomez, and the evacuation of the island by the American troops took place soon thereafter.

A new department, that of commerce and labor, was added to the machinery of administration, for the purpose of allowing the government to supervise great aggregations which modern conditions have developed in both capital and labor, and the first secretary was George B. Cortelyou, appointed February 23, 1903. It conducted many investigations which developed information of practical advantage to the nation, the best known of these being the packing industry of 1904, the report of which resulted in several indictments and the passage of a law creating a general system of meat and factory inspection and tagging and the famous food and drug act, passed June 30, 1906, under the provision of which no adulterated or misbranded foods may be imported or carried in interstate commerce.

Roosevelt's first administration was highly creditable and won not only widespread approval at home, but the admiration of the whole civilized world, so that at the Chicago convention in 1904 he was enthusiastically nominated to succeed himself, and was elected in November over Alton B. Parker, by a vote of 7,621,985 to 5,098,985, and 336 to 140 in the electoral college, the largest plurality (2,523,750) ever given to a candidate for President. The most brilliant achievement of his second administration was his rôle of peacemaker between Japan and Russia, which brought to an end the bloodiest conflict of modern times. This accomplishment is regarded by many as Roosevelt's greatest achievement, and he himself considered it as such. In other ways also has he been the bearer of the olive branch, notably when the French and German governments were at swords point over the Morocco situation, he made possible the Algeciras conference. By offering the good offices of the United States at a critical time, when Argentina and Chili were fast approaching warlike conditions, and when Brazil and Argentina were on the point of hostilities over the Uruguayan question, he spoke the words of calm counsel which started matters toward a peaceful understanding. In recognition of the great service to the cause of peace he was awarded the Nobel peace prize on December 10, 1906. The prize ($40,000) he devoted to a "Foundation for the Promotion of Industrial Peace," a general instrumentality for arbitrating the differences between capital and labor. Furthermore Roosevelt's administration was notable for the numerous treaties of peace negotiated with the various nations of the world. There were such treaties with practically all of the world nations excepting Germany and Russia. And in November, 1907, as the result of the joint action of the United States and Mexico, there was convened in Washington a notable peace conference between representatives of Costa Rica, Guatemala, Salvador, Honduras, Nicaraugua, Mexico, and the United States. During its fourteen sessions eight conventions or treaties were subscribed to. McKinley's policy of the open door to China and the maintenance of China's territorial integrity was carefully and loyally continued. By an exchange of notes dated November 30, 1908, between Japan and the United States, each country solemnly declared its adherence to the principles of equal commercial opportunities in China and the integrity of China's territory, which put an end to the rumors of war by which the thoughtful in both countries were worried and perplexed. The Alaska boundary dispute was settled in favor of the United States by a special commission, and other minor matters long in controversy with Canada were satisfactorily adjusted. A convention with the Dominican republic, which was concluded February 8, 1907, concerning the aid of the United States in the collection and application of the customs revenues of that republic, carried to successful completion the negotiations begun by Secretary John Hay. Other matters connected with foreign relations were the development of the civil government in the Philippines, and the trade and commerce with those islands, Porto Rico, and Hawaii; establishment of better relations with the republics of South America; civil government firmly established in Porto Rico; insurrection quelled and formal government installed in the Philippines under a military commission which inaugurated local legislative elections and internal home rule, and the reorganization of our consular service.

President Roosevelt's administration at home was preëminent in the fact that he seized on a propitious moment, when scandalous exposures had aroused the public against chicanery and corruption, to give the American people a moral shaking up and bring home to the nation his doctrines of business honesty and righteousness in public life—doctrines that he had persistently advocated throughout his whole career. With boundless energy and unflagging zeal, he swelled the tide of their anger until by punishment actually inflicted or through the deterrent fear

of it, hosts of wrongdoers were driven into honest ways, old abuses were stamped out, and a sounder and fairer standard of business conduct established. It had long been known that there were flagrant violations of the Sherman anti-trust law. One of the first prosecutions was against the Northern Securities Company, a holding concern controlling the stock of competitive railroads of the Northwest, which the courts dissolved. Other convictions followed this, and then prosecutions were begun for rebating, the most prominent of them being that against the Standard Oil Company, which was convicted and fined $29,240,000 although that judgment was reversed on appeal. Additional laws were enacted regulating railroad rates, forbidding a discrimination in rates and rebates and enlarging the powers of the interstate commerce commission.

The movement for the conservation of natural resources was the logical development from the experience of the interior department in administering the public domain. It was discovered that numerous frauds had been perpetrated by which private interests obtained possession of a large part of public lands, especially those rich in metals, minerals and forests. Prosecutions were carried on against these persons, including members of the United States Senate, and many convictions were secured. Realizing the seriousness of the rapid disappearance of the forests and the consumption of the mineral resources, President Roosevelt issued an invitation in November, 1907, to the governors of the states and the territories of the United States to meet him at the White House, Washington, in the following May, to discuss the question of means to conserve the natural resources of the country. Invitations were also extended to ex-president Cleveland, William Jennings Bryan, Andrew Carnegie, James J. Hill, John Mitchell, Judge George Gray and other prominent men of affairs. The meeting took place May 13, 1908, during which Roosevelt in an address reviewed the treatment of natural resources throughout the world, especially the use and waste of them in the United States during the past century. One of the last big accomplishments of the Roosevelt administration was the meeting of a similar but international conference of representatives of Canada, the United States and Mexico on the same subject. In addition to the above Roosevelt appointed the Keep commission to investigate and reform the workings of the several executive departments at Washington; appointed an inland waterways commission to promote the improvement of the Mississippi and its tributaries; selected a rural life commission to investigate the home life and general condition of the American farmer for the purpose of inaugurating measures for the betterment and uplift of the farmer and his family; caused a searching investigation of the post-office department to be made, which developed sensational conditions of corruption and resulted in many dismissals and several penitentiary punishments; sent Secretary Taft to Rome to settle the friars' land controversy in the Philippines by personal negotiations with the Pope; went in person to investigate conditions of the Panama canal work (the first time a President of the United States ever journeyed beyond the limits of his country); sent Secretary Root on a tour of the South American states, Mexico, and Canada, in order to promote a better understanding and more cordial relations among Pan-American governments; dispatched Secretary Taft to Cuba, Panama, the Philippines, China, Japan and Russia in order to eliminate the possibility of friction in dealing with matters of international concern; sent a formidable section of the navy down the Atlantic and up the Pacific coast of South America, thence to Australia, Oceania, Japan, Asia and Europe via the Suez Canal in order to show mankind that the United States would care for herself with a large share of her fleet on the eastern hemisphere and that she had the means, the machinery, the motive power, the men and the nerve to make the first girdle of the entire earth with a line of battleships; forced a way to get before the Czar of Russia the American protest against the massacre of Jews at Kishenev, in 1903, when all other nations had failed, and that too without offending the Russian government; advocated an inheritance tax in a speech made when the cornerstone for the new office building for the House of Representatives was laid; consistently denounced the wrongdoings of the «wealthy criminal class;» closed the post-office at Indianola, Miss., because its patrons formed a mob and threatened the life of its colored postmistress unless she should abandon the office; summarily discharged without trial or honor an entire company of negro soldiers at Brownsville, Texas (1906), because some of them had been accused of promiscuous shooting in the town, but subsequently revoked that portion of his order which assumed to deprive the dishonored soldiers of all right to hold office of honor or trust; and commissioned several Democratic officials in the South because he regarded them as more fit than their Republican rivals.

President Roosevelt also selected William H. Taft to be his successor in the Presidential chair. He recognized in Taft the best qualifications for continuing the reform policies begun by himself, and the result of the ensuing election showed that the American people had faith in his judgment. He made this selection two years in advance and in spite of vehement protests by the pepole against the strongly unrepublican idea of a President dictating his own successor, brought about Taft's nomination and took a lively interest in the campaign which elected him. No President ever attempted such a wide participation and controlling interest in public affairs; no one ever made so many addresses, sent so many messages to Congress, broke so many precedents, relied so little on the recommendations of senators and political leaders, indulged in so many writings, gave out so many statements, met so many constituents of all grades, engaged in so many personal—even turbulent—controversies, wrote so many letters which found their way into the public prints, exercised so much active sway over the army and navy and the executive departments, executed so many reforms in the conduct of public business, advocated such advanced forms of social and industrial democracy, instilled so

much strenuous activity into everyday military affairs, treated mere wealth and financial power with so much contempt and the oppressions of wealth with such destructive severity, preached so steadily and earnestly for labor, health, activity, and right living, and for downright honesty, reached out so intrepidly and effectively into the domain of world politics, was on terms of personal intimacy with so large a number of foreign diplomats, or took such an active and decisive hand in partisan politics. He sent 421 messages to Congress, regular and special, and vetoed 40 bills. His official proclamations and executive orders numbered almost 900, and his published letters, addresses, "talks," interviews, "authoritative" statements and speeches relative to public affairs were almost literally innumerable.

Upon the expiration of his term in 1909, he became a contributing editor of 'The Outlook,' engaged to deliver the George Romanes lecture at Oxford, England, in 1910, accepted invitations to lecture at the Sorbonne, Paris, and the University of Berlin in the same year, and made preparations for an extensive hunting trip in Africa. This trip to Africa was called a scientific expedition, outfitted by the Smithsonian Institution, to gather natural history materials for the new United States national museum at Washington, which was very deficient in examples of wild life on the dark continent. Besides Roosevelt and his son, Kermit, the party consisted of Major Edgar A. Mearns, Edmund Heller and J. Alden Loring, representing the Smithsonian institution, and R. J. Cunninghame, guide. He remained in Africa one year, during which some 7,000 specimens of wild animals were secured, and before his return an account of his adventures appeared in 'Scribner's Magazine.' Returning to civilization in the spring of 1910, Roosevelt passed through Egypt, Italy, France, Belgium, Austria, Germany, Holland, Denmark, Norway, and Sweden—every large country of Europe save Russia—being everywhere received with honor. He lectured to audiences in Egypt, Germany, France, England, and Norway, where he was awarded the Nobel Peace Prize on account of his share in promoting peace negotiations between Russia and Japan some years ago. Before he had reached England on his homeward trip, President Taft appointed Mr. Roosevelt envoy extraordinary to represent the United States at the funeral of Edward VII. In London he was given the freedom of the city, and there addressed the Englishmen on their Egyptian policy, an address which aroused considerable comment, as did his earlier lecture to the students in Egypt. In France he discussed his favorite race-suicide views, and in Berlin lectured on "Biological Analogies in History." Roosevelt and his party returned to America June 18, 1910, and he was enthusiastically greeted by the citizens of New York.

In addition to his activities, politically and otherwise, Mr. Roosevelt has been a prolific writer, among his books being 'Naval War of 1812' (1882); 'Life of T. H. Benton' (1886); 'Life of Gouverneur Morris' (1887); 'Ranch Life and the Hunting Trail' (1888); 'History of the City of New York' (1890); 'Essays on Practical Politics' (1892); 'American Big Game Hunting' (1893); 'The Winning of the West' (1889-96); 'Hunting in Many Lands' (1895); 'American Ideals' (1897); 'Trail and Camp Fire' (1897); 'The Rough Riders' (1899); 'Life of Oliver Cromwell' (1900); 'The Strenuous Life' (1900); 'California Addresses' (1903); 'Maxims of Theodore Roosevelt' (1903); 'Addresses and Presidential Messages' (1904); 'Outdoor Pastimes of an American Hunter' (1906); 'Good Hunting in Pursuit of Big Game in the West' (1907); 'African Game Trails' (1910). His works appeared in eight volumes in 1902. He wrote also in 'Hero-Tales from American History' (1895, with H. C. Lodge); volume vi of the 'History of the Royal Navy of England,' and 'The Deer Family' (1902, with several others). The best of his books is 'The Winning of the West,' the narrative of the conquest of United States territory west of the Alleghanies, which takes good rank among authoritative work on United States history.

Among this many popular magazine articles and addresses are: "American Ideals," "True Americanism," "The Manly Virtues and Practical Politics," "The College Graduate and Public Life," "Phases of State Legislation," "How Not to Help Our Poorer Brother," "The Monroe Doctrine," "Washington's Forgotten Maxim," "National Life and Character," "Social Evolution," "The Law of Civilization and Decay," "Expansion and Peace," "Latitude and Longitude of Reform," "Fellow Feeling a Political Factor," "Civic Helpfulness," "Character and Success," "Eighth and Ninth Commandments in Politics," "The Best and the Good," "Promise and Performance," and "Christian Citizenship." These, together with his official messages and papers, political speeches, public addresses, controversial and other writings, constitute the most notable, as it is the most virile, bulk of literary work in American history. His books are characterized as "marked by felicity, vigor, and clearness of expression, with descriptive power," and his historical writings are praised for their "accuracy, breadth, and fairness." Mr. Roosevelt dictates with great facility and rapidity and spends no time in recasting and polishing, and none in making indexes. He can break into important dictation to receive a caller or attend to public business and at the end of the interruption take up the thread of his work instantly, as if nothing had happened. His composition is direct, clear and rugged, but often rough and sometimes ungrammatical. Mr. Roosevelt was married first on October 27, 1880, to Alice Hathaway, daughter of George Cabot Lee, of Boston, who died February 14, 1884, leaving a daughter Alice, now the wife of Hon. Nicholas Longworth of Cincinnati, Ohio; and second, in London, on December 2, 1886, to Edith Kermit, daughter of Charles Carow of New York, who is the mother of five children: Theodore J., Kermit, Ethel Carow, Archibald Bullock and Quentin Roosevelt.

Charles Evans Hughes

Charles Evans Hughes was born at Glens Falls, N. Y., April 11, 1862, the son of David Charles and Mary Catherine (Connelly) Hughes. His father (1832-1909), a native of South Wales, came to this country in 1855, and held pastorates of Baptist churches in Oswego, Newark, Brooklyn, Scranton and other places. His mother was of Scotch-Irish extraction. Owing to delicate health, he did not attend school regularly until he was 10 years of age, and up to that time was trained by his mother. After attending the public schools of Newark, N. J., he entered Madison college (now Colgate University), being the youngest man in his class, but two years later changed to Brown University. Although not a close student, he distinguished himself by the remarkable facility with which he mastered every subject of study. Just before graduation a classmate suggested to him the advisability of taking up the law as a profession, and the idea was favorably entertained, although up to that time he had never given the subject the least consideration. In his junior year he won the English literature prize and the Dunn prize, while in his senior year he received the Carpenter prize, awarded for general attainment. He delivered the classical oration on graduation in 1881. Three years later he received the degree of A. M. in course.

Having always had a strong liking for teaching, Mr. Hughes accepted a professorship offered him at Delaware Academy, Delhi, N. Y., and taught Greek and mathematics there for a year. His duties required one-half of each day only, and he now began serious study of law, devoting the remainder of the day to reading in the office of Judge William Gleason, one of the foremost attorneys in that locality. Removing to New York city in 1882, he entered Columbia Law School, also studying in the office of Stewart L. Woodford, United State district attorney for New York, and in the office of Chamberlain, Carter and Hornblower. At the law school he won a fellowship of $1,500. Mr. Hughes was graduated with the degree of LL.B. in 1884, was admitted to the New York bar the same year, and entered the firm of Chamberlain, Carter and Hornblower as a clerk. In 1885 this firm became Carter, Hornblower and Byrne, Mr. Hughes being taken in as junior partner, and so continued until 1888, when the firm of Carter, Hughes and Cravath was formed. Up to 1891 he handled largely the court proceedings of the firm. Feeling the need of a change for his health's sake, he accepted a professorship in the law school of Cornell University, and held it for two years, his subjects being contracts, evidence bills, partnership, and international law. Largely owing to the influence of Mr. Carter, who had become very much attached to him, he resumed his connection with the firm in 1893, which shortly after became Carter, Hughes & Dwight. On the death of Mr. Carter, in June, 1904, the firm became Hughes, Rounds and Schurman. He devoted his attention to the general practice of law, and if he made any specialty it was as a commercial lawyer, although he handled cases for large corporations, usually being brought into such cases through another attorney.

It was owing to the fact that he was untrammelled and beyond the influence of corporations that he was selected by the committee appointed by the New York state legislature in 1905 to investigate the price of gas and electricity. This inquiry brought Mr. Hughes into general prominence, and resulted in the reduction of the cost of electricity. In the summer of 1905, while he was in Europe, he was selected by the insurance investigating committee appointed by the legislature to investigate life insurance companies in the state, beginning with the Equitable of New York city. The fact that many eminent lawyers were retained by the companies, or were counsel of great corporations connected with them, made the selection a difficult task, but the choice received general approbation. The committee began its session on September 6, 1905, and continued it for several months. The hearings made a profound sensation because of the prominence of the witnesses called, the startling disclosures made, and the thorough probing of the insurance companies status and methods by the chief counsel. Mr. Hughes displayed a remarkable memory for details; a thorough acquaintance with the facts and figures presented; admirable skill in extracting the information wanted from obdurate witnesses; an attitude of impartiality, and an absolute sincerity of purpose. One result of this investigation was the remedying of flagrant abuses connected with the management of insurance companies; another was to place Mr. Hughes in the front rank of the bar of New York.

In 1906 the Republican party in the state of New York was upset by factional wranglings. When it became evident that the Democratic convention was to nominate William R. Hearst for governor, Mr. Hughes, who had previously been suggested for the Republican candidate, was looked upon as the one most likely to poll the full Republican vote. He was nominated by acclamation September 26, 1906, without solicitation on his part. He accepted the nomination without a pledge other than to do his duty according to his conscience, saying that if elected it would be his ambition to give the state a sane, efficient and honorable administration, free from taint of bossism or of servitude to any private interest. The campaign was a memorable one in the history of the state, and he was elected November 6, 1906, by a majority of almost 60,000. Throughout his administration Governor Hughes proved himself a courageous executive, one who strove to accomplish what he believed to be for the public welfare. He approved measures passed by the state legislature, upholding the integrity of the constitution, maintaining the high character of the public service, providing for the regulation of corporations and for the protection of the people's interests. He formulated and had passed

ness, a talent for knowing and handling men and a huge capacity for long and strenuous hours of labor.

Entering his father's business in 1853 when only 14 years of age, Edward Jr., applied himself diligently to the performance of his duties in order that he might be better fitted by a technical knowledge of details to undertake the entire management of affairs when his father could no longer assume such responsibilities and should be thinking of a successor on whose shoulders he could throw the mantle of authority. It was not long before he had mastered the details of the business as he had inherited a taste for metallurgical chemistry from his father and he gradually rose from one position to another, all the while aiding his father by giving him the advantages of a younger and fresher point of view, by suggesting means for extending the business and by improving the methods then in vogue in the works of the company. In 1868 his father took him into partnership under the name of Edward Balbach and Son and the firm continued to conduct their business under that name until 1891. A year prior to this date the elder Balbach had passed away and in 1891 the son incorporated the firm as the Balbach Smelting and Refining Company, with himself as president. When he succeeded his father in the active management of the business it was in a prosperous and flourishing condition but soon after he assumed full control an expansion in the sales of the company was noticeable and so successful were his methods of conducting the affairs of the company that it now is the largest industry of its kind in the world, the works occupying more than six acres of ground and employing more than 700 men. There is also a plant on Newark Bay, known as the bay plant, where copper is refined.

Mr. Balbach was of an inventive turn of mind which showed itself most particularly in relation to his own business. In 1864 he patented a new desilverizing process for argentiferous lead, which later became known as the «Balbach Process.» Three years later he patented a process for the distillation of silver, lead, and zinc alloy in black lead retorts which process became widely known and universally used. In 1873 he also patented a water jacket used for smelting and refining works and this was adopted all over the world because of the great saving in fuel effected by its use. In devising this water jacket he was greatly aided by his wife.

In the middle of last century the copper desilverizing process by vitriolization came into use at Oker on the Harz. Mr. Balbach introduced it in this country and used it with great advantage for many years, until, because of the universal adoption of the process, and the consequent great increase in the production, blue vitriol could no longer be sold. It was then said that the vitriolization process had been dropped at Oker and a new method of desilverizing the black copper had sprung up, viz., by means of electricity. As the works at Oker were inaccessible, Mr. Balbach tried a method of his own to separate copper from its admixtures by electrolysis, and he was surprisingly successful. After only a few experiments, 48 tanks were started February 17, 1883. These first tanks were rather small, (1½ by 2½ by 4 feet inside) and produced only about one-half a ton of electrolytic copper per day, but an extension of the works was at once begun with tanks nearly five times the size of the former ones (2.33 by 3.5 by 9 feet inside). The first 36 of these tanks came into operation March 13, 1884, and in their shape and size, as well as general arrangement, there has been but little change up to the present time. They were copied all over the world, even with their imperfections. The former vitriol shop was then turned into tank rooms and these were increased until all available space had been occupied. For the first 12 years the anodes were cast by a cupola furnace, but the impurities of such anodes made the sequent electrolytical work and the attaining of a good marketable product very difficult and costly, and therefore reverberatory furnaces were substituted for both refining and casting the anodes. These furnaces were brought to the highest degree of perfection, so that now, considering the small space necessary for them, they challenge competition. When the percentage of nickel in the black copper reached a sufficient height, Mr. Balbach provided arrangements for producing nickel sulphate, and finally an electrolytic nickel shop was turned up, which for some years produced about one ton of electrolytic nickel per day. This was the first place in existence where solid malleable nickel was made on a large scale electrolytically, and it has served as a pattern for all modern electrolytic nickel works. Almost equally original is the treatment of auriferous silver bullion, introduced by Mr. Balbach, which in its simplicity and perfection can hardly be surpassed.

He was also much interested in political affairs and was always a hard and influential worker in the interests of his party. At one time he was so strongly urged by his friends and admirers to accept a nomination for Congress that he finally decided to make the campaign but he was defeated by a narrow margin. Mr. Balbach was always an enthusiastic supporter of Grover Cleveland, and a liberal contributor to the party, and in 1884 his home was the scene of a notable reception to Cleveland when the latter was a candidate for President. The friendship between the two men and their admiration for each other continued up to the time of Mr. Cleveland's death. In 1896 when the country was split upon the silver question Mr. Balbach decided that he could not conscientiously give his support to Mr. Bryan and he is supposed to have voted for McKinley. When the silver question was dropped, however, he returned to the Democratic ranks. Mr. Balbach was Presidential elector three times. The only other political position he ever held was in 1894 when he was appointed to a constitutional commission for making certain changes in the existing laws. He had traveled extensively and had seen all the most interesting sections of the world. He was a member of the Essex and many other clubs, societies and commercial organizations and also took a great interest in sports of all kinds, but he disliked shooting and by principle was opposed to the killing of birds and beasts. He was of a beneficent nature and always ready to extend the helping hand, his charities being as quiet as they were numer-

ous. One instance of his thoughtfulness is the provision made for his employees who were injured or became sick. One of his most absorbing and interesting recreations from business cares was the gathering of coins and minerals and in the old homestead in Newark he had a large and beautiful collection which contained many rare and valuable specimens. On January 21, 1869, he was married at Newark, N. J., to Miss Julia Anna Nenninger, daughter of Peter F. and Anna B. (Miltz) Nenninger, of Newark, N. J., and to them was born one daughter, Julia Anna Margaret, now the wife of Edward Randolph, the son of William M. and Rebecca E. (Wassell) Randolph, of Memphis, Tenn., and a descendant of the famous Randolph family of Virginia. Mr. Randolph, who is secretary and treasurer of the company, is now in full control of the works in which Mr. Balbach took such pride.

Oscar Solomon Straus

Oscar Solomon Straus was born at Otterberg, Germany, December 23, 1850, the son of Lazarus and Sara (Straus) Straus, and brother of Isadore and Nathan Straus, both well-known merchants. The family emigrated to America in 1854 and settled first at Talbottom and afterwards at Columbus, Ga., where they lived until 1865. Removing to New York, the father established the pottery and glass ware importing firm of L. Straus and Son, and Oscar enjoyed the opportunities of an excellent education. After attending the Columbia grammar school he entered the college and was graduated A. B. in 1871. After two years in the Columbia Law School he was graduated LL.B., and in 1874 received the degree of A.M. as the result of other post-graduate studies. Immediately upon graduation from the law school he was admitted to the bar and entered upon the practice of his profession. Though successful in securing prominent clients and participating in some of the most important railway and commercial cases of the eight following years he was compelled to retire from practice on account of impaired health in 1881. In that year he entered his father's firm and remained active in it until 1906.

Oscar S. Straus

In the meantime he was appointed United States envoy extraordinary and minister plenipotentiary to Turkey by President Cleveland, which post he held during 1887-89. His incumbency fell in a most critical time on account of disturbances which resulted in the closing of the American schools and a serious interference with the American missions. He at once demonstrated his diplomatic gifts, as well as his patriotism and characteristic energy by persuading the Grand Vizier to order the reopening of all American schools and to insure them protection. This action for the first time gave the institutions a legal status in the country. His efforts in behalf of the missions earned him the official thanks of the Congregational and Presbyterian boards of foreign missions, transmitted through the secretary of state. Both the American and British Bible Societies were, through his efforts, for the first time permitted to issue tracts in the Turkish language, and to distribute them among the population. Declining on account of his American citizenship to accept the decoration of the highest order of the empire which the Sultan tendered to him, that monarch nevertheless conferred upon him the first order of Shefekat, which is the Porte's highest distinction for women.

After an interim of nine years, Mr. Straus was again appointed to the Turkish ministership by President McKinley in 1898, as the man most fitted by qualifications and experience for that difficult position. Serious difficulties had arisen between the two countries, chiefly the result of the Armenian massacres of 1895, in which our missionaries sustained severe losses. He at once succeeded in getting the Sultan to recognize the latter's claims and speedily settled the questions at issue. The Spanish-American war brought ample opportunity for the tactful exercise of his abilities. His persuasion secured the Sultan's intercession, as the spiritual head of the Moslem world, with the Mohammedans in the Philippines, who otherwise would have joined the insurgent Aguinaldo against the Americans. He returned to the United States in 1901 and in the following year was appointed member of the Permanent Court of Arbitration at the Hague to succeed ex-President Benjamin Harrison, deceased. A fitting recognition of his high standing in the commercial world came in the form of his appointment by President Roosevelt as secretary of commerce and labor in his cabinet. He entered upon the duties of this office December 17, 1906, succeeding George B. Cortelyou, and continued to hold the office to the end of the Roosevelt administration, March 4, 1909, distinguishing himself by his energetic management of the affairs of the department, which may be said to have still been in its infancy at the time of his appointment.

His chief claim to distinction, however, lies in his knowledge of international law and diplomacy, particularly with regard to the Near East. Our diplomatic relations with Turkey had become more and more important, and our

mission accordingly was raised to an embassy extraordinary and plenipotentiary. In casting about for the proper man to fill it, President Taft could find no one as well qualified as Mr. Straus. His acceptance aroused much favorable comment for the patriotic and sacrificing spirit it manifested.

Ambassador Straus is a profound student, especially along historical, diplomatic and civic lines. He is the author of 'The Origin of the Republican Form of Government in the United States' (1886); 'Roger Williams, the Pioneer of Religious Liberty' (1894); 'Development of Religious Liberty in the United States' (1896); 'Reform in the Consular Service' (1897); 'United States Doctrine of Citizenship and Expatriation' (1901); 'Our Diplomacy: a Survey' (1902); 'Industrial Peace' (1903); 'The Hope of Our Industrial Future' (1903); 'The Hague Tribunal. Its Meaning and Scope' (1904); 'The United States and Russia: Their Historical Relations' (1905); and the '250th Anniversary of the Settlement of the Jews in America' (1905); and numerous articles in American magazines as well as the 'Westminster Review' and other English periodicals. He is the possessor of a valuable library, especially rich in Americana, which includes many valuable manuscripts and other rarities.

Mr. Straus is a member of the New York Board of Trade and Transportation, of which he has been both vice-president and president. He has also been president of the National Primary League and the American Social Science Association, and the American Jewish Historical Society; vice-president of the National Civic Federation and the International Law Association. He is active in philanthropic organizations, being a trustee of the Baron de Hirsch Fund and the Hebrew Orphan Asylum in New York. For many years he was chairman of the educational committee of the Institute for Improved Instruction of Deaf-Mutes, and he is a member of the American Bar Association, the Reform, Lawyers', Authors', Nineteenth Century and Commonwealth clubs. The degree of Litt. D. was conferred upon him by Brown University in 1896; that of LL.D. by Washington and Lee University in 1898; by the University of Pennsylvania in 1900, and by Columbia University in 1904. He was married April 19, 1882, to Sarah, daughter of Louis Lavanberg of New York, by whom he has three children.

Leslie Mortimer Shaw

Leslie Mortimer Shaw was born on a farm at Morristown, Lambille County, Vt., November 2, 1848, son of Boardman O. and Louisa (Spalding) Shaw. The Shaws are of Scotch origin. Shiah, surnamed de Shawe, a son of MacDuff, third Earl of Fife, was supposed to be the first of the name, born about 1025. The first of the family in America was Roger Shaw of Cornhill, England, who came to Cambridge, Mass., in 1636 and removing to Hampton, N. H., in 1639, played a considerable and honorable part in public affairs. Leslie M. Shaw worked on his father's farm until he became of age, attending the district school and later the People's Academy at Morrisville, a few miles from his father's farm. In 1869 he went to Mt. Vernon, Ia., to visit relatives. Here he found employment and taught a near-by country school. Being ambitious for a better education, he entered Cornell College, where he was graduated in 1874. He was also graduated at the Iowa College of Law (LL.B.), at Iowa City, in 1876. After being admitted to the bar he removed to Denison to practice. The experience of handling money for his clients and the spectacle of a rich agricultural country developing more rapidly than its fiscal institutions directed his attention to banking, and he very soon began promoting that business and in time was at the head of active and useful banks at Denison, Manilla, and Charter Oak, all in Crawford county. From the beginning he took a leading part in church and Sunday-school work and in every move intended to promote the welfare of the place. He was repeatedly elected to the school board and for some time was its president. He was the leader in founding (1893) and sustaining the Denison Normal and Business College.

Generally politics, beyond the welfare of his city and county, did not enlist his activities, but in 1888 he became more deeply interested in national issues, and took a modest part in the campaign of that year. In 1896 he heard a speech made by William Jennings Bryan at Denison in favor of the free and unlimited coinage of silver at the ratio of 16 to 1, and observed that it produced a strong impression upon the community. Taking pains to inquire elsewhere, he found that Mr. Bryan's speeches were winning converts wherever he appeared —that the masses were drifting toward him. Believing that if put into actual practice the free silver theory would destroy national prosperity; that the people did not realize the actual meaning of the free silver campaign, and that the paramount necessity of the hour was to inaugurate such an educational propaganda as would conteract Mr. Bryan's wonderful influence upon his hearers, Mr. Shaw prepared charts, statistics and illustrations out of his own experience as farmer, banker and lawyer, and answered the Democratic nominee by a public address to his friends and neighbors of Denison. In college debates and local controversies and at the bar he had been known as a peculiarly clear, incisive and convincing speaker, but no one suspected that it would be

safe to match him against orators of the Bryan calibre until after he had delivered this anti-free silver address. His fame was instantaneous. His illustrations and arguments were published everywhere and his services were in great demand. Not realizing his own powers and importance, he asked to be assigned to school houses and cross-roads, but very soon he was drawn to the large cities, where his quaint illustrations, his ample fund of folk-lore, his illuminating illustrations and his resistless logic carried the masses with him. He made sixty formal addresses and was credited with changing the tide of Iowa back to McKinley.

In 1897 there were ten strong candidates for the Republican nomination for governor of Iowa, including Leslie M. Shaw. The McKinley campaign of the previous year had given to him a strength with the people of which the party leaders were unaware, and he was elected over Frederick E. White by a vote of 225,500 to 195,000. Taking office in January, 1898, his administration was popular and successful. He was very prompt and energetic in securing Iowa's quota of soldiers in the Spanish-American war, and gave personal attention to the welfare of all state institutions. He was re-elected in 1899 over his previous opponent by the largest vote ever given a Republican candidate for governor in Iowa. During his four years of service as governor he was unable to confine his activities within state limits. Invitations to make addresses on important occasions came from all parts of the country and many of them were accepted. On some of these occasions he spoke in competition with men of national renown as orators but "he was never outclassed," declared John Hay, "because he constituted a class by himself." In 1898 he was permanent president of the International Monetary Conference at Indianapolis. In his address he declared that the conference had no right to consider whether the gold standard should be maintained, for the people had already settled that. The only subject to be discussed, he said, was what sort of a financial superstructure should be created on the gold-standard foundation.

During the Presidential campaign of 1900 he made numerous speeches, for Mr. Bryan was again running against Mr. McKinley. In South Dakota he spoke from the same platform with Theodore Roosevelt, then running for the Vice-Presidency, and the complete mastery of the principles of finances, tariff and business which he then displayed, created the impression in Mr. Roosevelt's mind which led, ultimately, to his appointment as secretary of the treasury. On December 12, 1900, Mr. Shaw created a still deeper impression upon the leaders of national thought by his address in the east room of the White House at Washington on the centennial anniversary of establishing the Federal government in that city. His theme was "The Development of the States during the Century." His grasp of the great subject constituted a general surprise and led President McKinley to declare that "Governor Shaw was the first man he had known who could crystallize statistics into poetry." When Lyman J. Gage retired from the office of secretary of the treasury February 1, 1902, President Roosevelt appointed Governor Shaw to take his place. He was soon called upon to dispose of numerous knotty problems. The press teemed with complaints against the treasury regulations which governed the inspection of the baggage of persons returning from abroad and also against the immigration inspection service. In order to secure first-hand information concerning these matters he made personal investigations which resulted in the promulgation of modified rules. It was his habit also, when stock speculation created panics, to go in person among merchants, manufacturers and importers, and learn directly from them whether and to what extent legitimate business was affected. On one of these visits he gave expression to the opinion that "bank reserves were created and maintained for use in emergencies and when such emergencies arose should be used to meet them." He was called upon in 1902, 1903, 1905, and 1906, to relieve the stringency in the money market; and when he found that the banks of the country could not or would not create extra reserves with which to meet the demands made upon them by extraordinary crop or business conditions, he caused the treasury to absorb what he believed would be sufficient funds to meet these occasions. He always explained to the President in writing, the character of and reason for any move of this kind. The practice of establishing what Mr. Shaw termed a "relief fund" has been followed by his successors. In defending the policy of the secretary of the treasury against the criticisms which followed every step taken in the public interest, he said to a convention of bankers in Washington: "Extraordinary measures to prevent the spread of epidemics are always commended; yet this country has never witnessed a pestilence which left in its wake so great an aggregation of suffering and sorrow as mark the course of financial disorders and industrial stagnation." Upon the expiration of his term, March 4, 1907, he became president of the Carnegie Trust Company of New York, remaining such until 1908. Since 1909 he has been president of the First Mortgage Guarantee and Trust Company of Philadelphia.

While in the treasury department he was called upon for addresses in all parts of the country, to many of which he responded. The subjects of these addresses included the tariff, reciprocity, merchant marine, the Philippines policies, the Cuban protectorate, transportation, as well as every phase of financial conditions, policies and proposed legislation. They abounded in quaint New England folk-lore, and apt illustrations from the rich field of the every day life and excelled in clearness, completeness and simplicity. A collection of fifty of the best of them was published under the title of "Current Issues," the most informing and valuable of which are "Evolution in Business Methods," "Importance of the Home Market," "A Tariff for Revenue Only," "Drawbacks," "Reciprocity," "Subsidies," "Statutory Control of Trusts," "Virtues and Defects of Our Currency System," "Credit Currency and Current Credit," "Currency Reform," "Inflation" and "Taxation." He suggested the plan of making the currency of the country elastic, which found many prominent advocates. Mr. Shaw was three times lay delegate to the great quadriennial conference of the Methodist Episcopal

church, and has for years been regarded as one of the most powerful lay members of that body. He has been a leader in fiscal and administrative reforms and succeeded in abolishing useless offices and eliminating unnecessary salaries. He is trustee of Cornell College, but a member of no clubs. He was discussed as good Presidential timber prior to the assassination of McKinley, and was favored in many localities for the nomination in 1908, but made no effort to secure the nomination after President Roosevelt had selected William H. Taft as the republican nominee. The degree of LL.D. was conferred upon him by Simpson College, Cornell and Wesleyan universities and Dickinson College. He was married December 6, 1877, to Alice, daughter of James Cranshaw, of Clinton, Iowa.

John Howard Whittemore

John Howard Whittemore was born at Southbury, Connecticut, October 3, 1837, and died at his home at Naugatuck, Connecticut, May 28, 1910. He was one of the four children of the Rev. Williams Howe Whittemore, a Congregational clergyman, who graduated from Yale College in 1825, and Maria Clark, his wife, on his father's side being descended from an old English family, many members of which played a prominent part in the founding, expansion and government of New England, and through his mother inheriting the blood of the hardy Hollanders who early in the 17th century were the pioneers in the Dutch settlements in America.

Mr. Whittemore's ancestors had been noted for their intellectual attainments, one of them having been the first schoolmaster at Medfield, Mass., and another the possessor of the largest library in the colony at Bridgewater, Mass. Following these examples the education of the boy began at an early age and as far as he was able to go it was thorough. Until he was 10 years of age he attended the public and private schools of Southbury, where he learned the fundamentals and later supplemented this with a course at the Collegiate and Commercial Institute of General William H. Russell at New Haven, where he studied for four years with the intention of entering Yale. Causes over which he had no control, however, compelled him to abandon the idea of a college course, and at the early age of 16 he entered business life, during the next three years being employed as a clerk with E. D. Morgan, Jr., and Elliott F. Shepard of New York, who were engaged in a commission business under the name of Shepard and Morgan. In 1857 this firm dissolved partnership and Mr. Whittemore, after spending a few months in the private office of E. D. Morgan, Sr., in March, 1858, removed to Naugatuck, where he entered the employ of E. C. Tuttle and Company, manufacturers of farm tools. In July, 1858, the works operated by this company were destroyed by fire and he entered into partnership with Bronson B. Tuttle to engage in the manufacture of malleable iron, and through careful management a large and lucrative business was built up. In 1870, however, the partnership was dissolved and a joint stock company was organized under the name of the Tuttle and Whittemore Company, which 10 years later became the Naugatuck Malleable Iron Company. So successful was this company that others of a like character were formed in New Britain, Bridgeport, Indianapolis, Toledo, Cleveland, Chicago, and Troy, N. Y., in all of which Mr. Whittemore was a director. Later the western companies were consolidated as the National Malleable Castings Company, with $3,000,000 capital, Mr. Whittemore becoming one of the directors of this company upon its formation.

In addition to these interests Mr. Whittemore was active in other industries of the Naugatuck Valley, including the manufacture of brass and hardware. He was largely interested in banking institutions, serving as first vice-president of the Colonial Trust Company until the death of the president, David S. Plume, when he assumed the latter office and continued to occupy it until he retired in November, 1909, though remaining as a director and chairman of the executive committee of the institution. He was also a director of the Naugatuck Savings Bank. In 1906 Mr. Whittemore was elected a director of the New York, New Haven and Hartford Railroad Company, and had for a long period served as a member of its executive committee. In this connection he used all his influence to secure improved railway facilities for the Naugatuck Valley. Beside the companies mentioned he was also a director in the Link Belt Machinery Company, the J. M. Dodge Company, the Bridgeport Malleable Iron Company, the Vulcan Iron Works, the North and Judd Manufacturing Company, the American Hardware Company, the Troy Malleable Iron Company, the Eberhard Manufacturing Company, and Landers, Frary and Clark.

The 'Waterbury American' said: "Mr. Whittemore has represented the best type of an able New England manufacturer, a man of wonderful capacity, of the greatest industry, and also of unusual ability in selecting others for carrying out projects which he has conceived. While he was the most hospitable host and the kindest to those in trouble, he clearly drew the line between sentiment and business, and in business matters he was a man of an unusual combination of progressiveness and boldness, and at the same time of conservatism. There was no detail too little to be considered by him and his plans were laid out with such breadth and at the same time with such attention to things often overlooked by more careless men that they were doubly fortified from

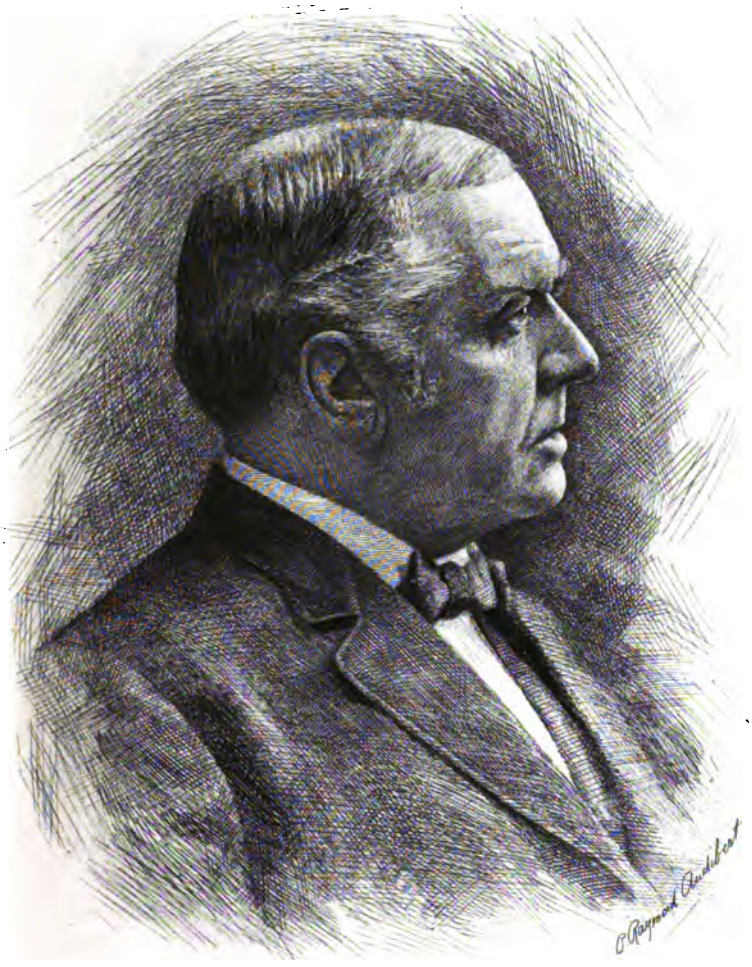
attack and more than ordinarily likely to succeed."

Mr. Whittemore was a member of the Republican party and throughout his whole career strove manfully to bring the politics of the state up to a higher level. He was for several years a member of the legislature and was a delegate to the constitutional convention of 1902, taking an active part in the debates and proceedings of both parties. Mr. Whittemore was a member of the Union League Club of Chicago, and the Waterbury Club, and his chief recreations were golf and travel, his ample fortune allowing him to indulge in the latter pleasure to a great extent. He was also fond of good music and literature and the works of the great artists and sculptors. He had a finely cultivated sense of the beautiful and in his residence had some of the choicest examples to be found in the state of the modern French school and other paintings. These included pictures by Edouard Manet and Claude Monet and Whistler's "The White Girl" and "La Andalusanne."

Mr. Whittemore was essentially a home man; and no wife had a more faithful husband nor family a more devoted father. On June 10, 1863, he was married at Naugatuck to Miss Julia Anna Spencer, daughter of Harris Spencer and Thirza Buckingham, and to them were born four children: Harris (b. November 25, 1864); John Howard (b. February 24, 1872; d. May 28, 1887); Gertrude Buckingham (b. August 31, 1874); and Julia (b. May 14, 1876; d. July 31, 1876).

While Mr. Whittemore was great as a captain of industry, as a business organizer and as a trustee of large interests, his name will be remembered and revered longer because of the generous and warmhearted nature of the man than it will because of his keen business acumen. While gaining great wealth through personal integrity, careful management and the exercise of brilliant business ability, he was never forgetful of the condition of those less fortunate than himself, always rendering his munificence in such a manner that the recipient felt more like the donor than the object of a charitable act. Mr. Whittemore believed that his wealth was a responsibility which he should turn to the advantage of the entire community and that he should use it to further the public interests whether they were of a religious or educational nature or whether they were represented by the outward features of town and country which delight the eye and cultivate the taste. He took a keen and kindly interest in affairs connected with the progress and advancement of the Naugatuck Valley and gave much of his means to improvements of all kinds. He presented to the town the Salem Grammar School, the high school, which he endowed, the Howard Whittemore Memorial Library (to which he gave $10,000 just before he died as an additional endowment fund) and did valuable work in improving the old town burying grounds, putting them in good condition, and in an association insuring their permanent care. He and Mr. Tuttle were the largest subscribers to the fund for building the new Congregational church and parish house; he also spent large sums to move the Soldiers' Monument, to build the drinking fountain and to improve the green, beside paying the cost of improving the public playground and many other localities, his gifts to the town aggregating more than $800,000. In Waterbury, Mr. Whittemore erected the Buckingham Music Hall, costing more than $350,000, and then presented it to the Waterbury Hospital, of which he was a director, the income to be used as an endowment fund for the latter institution on condition that the citizens of Waterbury raise $250,000 for the erection of a hospital building. To Middlebury, where his country home, Tranquillity Farm, was located, he presented schools, and throughout the entire section he made highway improvements of all kinds. He also took great pride in the Gaylord Farm Sanatorium, of which he was a director, not only giving money to it but also much of his time and best thought. Mr. Whittemore's private charities were many and judiciously exercised and he rarely failed to respond to the call of a worthy cause, but his deeds in this connection were not for notoriety. He gave financial assistance to innumerable benevolent objects, the majority of which were unknown, but among which was a generous contribution to the campaign against tuberculosis.

In manner Mr. Whittemore was modest and retiring and he always avoided ostentatious display, though these qualities were not to be mistaken for signs of uncertainty, fear or incapacity. He enjoyed simple home social affairs and those which he gave were noted for the good wholesome enjoyment which they afforded his guests. He loved the simple things of life: the farm and the woodland, the flowers and other beauties of nature; natural scenery as distinguished from landscape gardening; subjects of local interest; the promotion of worthy causes; the improvement of political conditions; no subject of human interest failing to appeal to him. Gentleness and simplicity of manner, dignity and manliness of bearing, geniality, modesty of judgment concerning matters not directly controlled by him, and a deference to the views of others united to make Mr. Whittemore's character most charming. His were the qualities that make a man great whether he be wealthy or not, and Mr. Whittemore's greatness was further exemplified by the useful manner in which he employed his means. The world is better because of his life and for generations to come his memory will be cherished "for his many kindnesses to the sons of men."



Louis Duncan

Louis Duncan was born at Washington, D. C., March 25, 1862, the son of Thomas and Maria (Morris) Duncan. His father was an Episcopalian minister and served as chaplain on the staff of Stonewall Jackson during the Civil War. He was a brother of Judge Duncan of the supreme court of Pennsylvania. His mother was a daughter of Commodore Charles Morris and a sister of Captain George U. Morris, both distinguished officers in the United States navy before and during the Civil War. Louis Duncan was educated at private schools and at the United States Naval Academy, to which he was appointed from Kentucky in 1876, by President Grant, and was graduated with distinction in June, 1880. For the next two years he cruised on the South Pacific station, visiting the ports of South America, the Pacific islands, Japan, Alaska, Mexico, and Peru. In 1882 he cruised on the North Atlantic station, was made ensign on March 3, 1883, and in the same year was sent to the Johns Hopkins University by the United States government, to take a post-graduate course in physics and electricity under the renowned physicist, Henry A. Rowland, with whom he formed a close friendship. While at Johns Hopkins he assisted in the work of determining the unit of electrical resistance for the United States government which was established, as 106.30 centimeters of mercury, one millimeter cross-section. In 1884, when only 22 years of age, he also served as chairman of the board of judges of the International Electrical Exhibit, given by the Franklin Institute of Arts and Sciences at Philadelphia, and received a certificate of appreciation and a vote of thanks from the society for this work. Upon receiving his degree of Ph.D. in 1887, he was appointed professor of applied electricity at the Johns Hopkins University, and resigned from the United States navy to accept this appointment. He held this chair until the outbreak of the Spanish-American war, when he was appointed by President McKinley to aid in forming a battalion of engineers for service in Cuba. He was commissioned major in the 1st volunteer engineers. After the war he returned to his profession of consulting electrical engineer. In 1902 he was appointed to organize the department of electrical engineering in the Massachusetts Institute of Technology, Boston, Mass., and was at the head of this department for two years.

Dr. Duncan has achieved a national reputation for his work in original electrical research. He has made a specialty of the application of electricity to the traction of street and suburban railways, as well as to the traction of freight and passenger cars on railroads by electricity. During 1891-94 he was associated with Frank J. Sprague, under the firm name of Sprague, Duncan and Hutchinson. He was prominently identified with the underground trolley systems of electric traction in Washington, D. C., during 1893-98, which was first introduced in that city, and also with the system of running trains by electricity through the Baltimore and Ohio railroad tunnel, in 1895-96, and with the electrifying of the Third Avenue street railway of New York city (1897-1901) which, under his direction and general management, was accomplished most successfully. He was frequently employed as consulting engineer for a number of improved telephone systems, and in 1905 he became the consulting electrical engineer for the Atlantic Telephone Company, of New York City. Professor Duncan took an active part in arranging the electrical exhibit at the world's Columbian Exposition, Chicago, Ill., in 1893, the elaborateness of which surprised and astonished the world, and in 1903 he was chairman of the electrical railway section of the International Electrical Congress at St. Louis, Mo. During 1901-04 he was consulting engineer for the rapid transit commission of New York city's famous subway.

Dr. Duncan has published numerous papers on topics pertaining to the subject of electricity and is the author of the articles on electrical traction in the 'Encyclopedia Britannica,' and also in 'The Americana.' He has secured a number of patents for electrical machines and improved secondary batteries. He is a member of the American Institute of Electrical Engineers, of which he was president during 1895-97; honorary member of the Franklin Institute of Arts and Sciences; fellow of the American Philosophical Society, and member of the Mathematical and Physical societies of France. He is also a member of the University, and Engineers' clubs of New York City, the Maryland Club of Baltimore, the Army and Navy Club of Washington, and the Automobile Club of America. Mr. Duncan was married, June 28, 1887, to Edith, daughter of James H. McKee, of Philadelphia, Pa., and has one son: McKee Duncan, and three daughters: Dorothy, Harriet, and Edith Duncan.

Ambrose Swasey

Ambrose Swasey was born at Exeter, N. H., December 19, 1846, the son of Nathaniel and Abigail Chesley (Peavey) Swasey. His early education was acquired at Exeter, where he learned the machinist's trade. In 1870 he went to Hartford, Conn., and entered the employ of the Pratt and Whitney Company. He paid special attention to the subject of gearing, and devised and perfected the epicycloidal milling machine for producing the true theoretical curves from which cutters for gear teeth are made, and invented a new gear-cutting engine for generating and at the same time cutting the teeth of spur gears, the process being a practical solution of a well-known theory of the interchange system of gear wheels.

He went to Cleveland, Ohio, in 1880, and entered into partnership with Worcester R. Warner, under the firm name of Warner and Swasey, for the purpose of manufacturing machine tools and astronomical instruments. The first of the large telescopes which the new firm designed and constructed was the 36-inch of the Lick Observatory, which was erected during the winter of 1887-88 under Mr. Swasey's personal supervision. Up to that time it not only was the largest refracting telescope, but was the first to be adapted to the triple purposes of visual, photographic and spectroscopic work. The instrument proved to be so satisfactory that the government commissioned this firm to construct a mounting similar in design for the 26-inch of the United States Naval Observatory, and later they were entrusted with the task of making the 40-inch telescope, as well as the 90-foot dome and the 75-foot elevating floor, for the Yerkes Observatory, Williams Bay, Wisconsin. The construction of a dividing engine for automatically graduating circles requiring the greatest accuracy, such as is necessary for astronomical instruments, is another problem which Mr. Swasey has recently successfully solved; and the most severe tests show that the greatest errors of this engine are less than one second of arc. Having traveled extensively at home and abroad, he has become familiar with ancient as well as modern engineering, in which he is especially interested. Mr. Swasey is the inventor of the circular dividing engine; and the Swasey depression range finder and many other scientific instruments in use the world over.

He is a man of genial nature and broad culture, and has held many positions of trust in the business world. He is vice-president and treasurer of the Warner and Swasey Company, was a member of the jury of awards of the Nashville, the Pan-American and Louisiana Purchase expositions, and vice-president of the jury of awards at the Jamestown Exposition. He received the honorary degree of Mechanical Engineer at Case University in 1905, was vice-president of the Mechanical Engineers Society in 1901-2, and elected president of that body in 1904. He is a past-president of the Civil Engineers' Club of Cleveland; member of the American Society of Mechanical Engineers; the Institution of Mechanical Engineers of Great Britain; the British Astronomical Society; a fellow of the Royal Astronomical Society; and received the decoration of Chevalier of the Legion of Honor from the French Government in 1900.

Mr. Swasey takes great interest in civic affairs and is one of the leading spirits of the Chamber of Commerce, the largest and most influential commercial organization in the United States, and of which he was president 1905-6. No citizen of Cleveland is more honored nor respected nor more public spirited than Mr. Swasey, and much of his time and money is given towards advancing and bettering the conditions of the great city of Cleveland. He was married at Hampton, N. H., October 24, 1871, to Lavinia D., daughter of David and Sarah Ann (Dearborn) Marston.

Isaac Stephenson

Isaac Stephenson was born on a farm near Frederickton, York County, New Brunswick, Canada, June 18, 1829, the son of Isaac and Elizabeth Watson Stephenson. His father was born in Ireland, and his mother was a native of London, England. Upon coming to America in 1818, his father settled in the great forest region of York county, where he engaged in farming and lumbering. In 1840 he removed to Bangor, Me. Five years later the son emigrated to Milwaukee, Wis., in company with Jefferson Sinclair, a lumberman, who purchased large tracts of forests, and turned his entire attention to lumbering in northern Wisconsin and the northern peninsula of Michigan, where he had previously acquired timber properties. Young Stephenson was his trusted factotum in these operations, exploring and estimating timber lands, felling, trimming and skidding logs, and managing lumber camps. In July, 1848, the first land office in the upper peninsula was opened at Sault Sainte Marie and Isaac Stephenson, personally familiar with the great timber belts of the «Soo» land district, attended and directed heavy purchases in behalf of Daniel Wells and Jefferson Sinclair. In winter he had charge of the camps back from Escanaba, banking great quantities of the

choicest white pine and in summer sailing freight vessels from Escanaba to Milwaukee and Chicago. Before he was 21 he owned a controlling interest in the schooner «Cleopatra» of which at times he himself was captain until she was lost in a gale on Lake Michigan in 1853.

In 1852 the city of Chicago voted to build a long breakwater opposite the city to protect the lake shore and young Stephenson was awarded the contract for the necessary timbers, which required four seasons to supply. He also got out and delivered spars—straight, clean pines of extra quality which averaged 100 feet or more in length. At that time there were no vessels with sufficient deck space to carry such long and heavy timbers, so he lashed timbers to the sides of the craft in such a way that the cargoes outrode all sorts of weather in safety. Previously in 1847, he had delivered a liberty pole 107 feet long at Janesville, Wis., towing it by water to Milwaukee and hauling it overland with a six-ox team. This spar was a conspicuous object in Janesville for a quarter of a century.

The unusual ability displayed by him in solving transportation problems and creating new and adequate methods of transportation according to the varying circumstances of the frontier, was undoubtedly the chief element of success in the enormous lumber operations of his later life. He was first to install steamboat service on the Menominee River, and its tributaries; first to place steamboats on the Cedar River, Ford River, and White Fish River and first to establish a barge line on Lake Michigan. Lake masters pronounced his plan impossible, but when his great mills began to turn out lumber in larger quantities than had ever been known before, and the Chicago market wanted more lumber than could be delivered, he organized a barge service which was successful from the first. In the spring of 1858, having purchased an interest in the N. Ludington & Company saw mill, he removed to Marinette, on the Wisconsin side of the Menominee River, at its mouth, which ever since has been his home. His interests and operations in fact made the city. His extraordinary capacity to manage men, machinery, camps, drives, dams, booms, transportation, yards, markets and supplies placed his companies in the lead of all competitors. Besides the N. Ludington Company he became the principal owner of the Peshtigo Lumber Company, the Menominee River Boom Company, the Stephenson Transportation Company, the I. Stephenson Company of Escanaba, the Marinette and Menominee Paper Company, the Stephenson Manufacturing Company, the Escanaba and Lake Superior railway, and many lesser concerns, and he owns banks, farms, hotels, an opera house and stretches of timber lands in Wisconsin, Michigan, Louisiana and California wide enough to cover the state of Delaware.

It is not at all practicable to undertake to give a complete list of his operations or his interests. Besides the N. Ludington Company he designed and built the Menominee boom at a cost of $1,250,000 and which at that period drove, sorted and delivered more logs than any other concern in the world and as accurately as a bank handles its cash and papers. To do this he erected 40 dams, «snagged» several tributary rivers and directed an army of men. The boom handled an average of 700,000,000 feet of logs in a season and has been known to deliver a billion feet in a year. He has erected 67 dams and he built at Peshtigo the largest woodenware factory in the world. For a time his principal saw mill at Peshtigo had a greater capacity than any other mill in the world, and his retail yards were the largest in Chicago. Even as far back as 1880 his three principal lumber companies owned over 400,000 acres of pine. He has an estate of 900 acres in Kenosha county, which is one of the model farms of the Union, another at Marinette, where he breeds road horses and racing stock and a third at Grass Lake, near his beautiful summer resort, which is devoted exclusively to cattle raising. On October 8, 1871, the Peshtigo and some of his other mills and property, as well as 1,100 persons, were destroyed by a fire tornado which developed in a wide area of forest fires that had been devastating the country; and on the same day the great fire in Chicago completely wiped out his retail and storage yards and mills in that city. His loss was over $2,000,000.

One of the most useful enterprises with which Mr. Stephenson has been connected is the Sturgeon Bay and Lake Michigan Ship Canal, which saves 150 miles of sailing to all craft trading between Green Bay and Chicago, or any other Lake Michigan port. Portes des Morts, the opening of the Green Bay into Lake Michigan, had always been full of destructive dangers to navigators. No one knew this fact better than Isaac Stephenson, who had often navigated through it, so that when Joseph Harris began an agitation in favor of constructing a canal across the Door County peninsula, Mr. Stephenson contributed liberally to the undertaking. With his partner he took stock in the construction company, served on the executive committee and did everything he could to promote the enterprise, which was completed under Federal supervision.

Mr. Stephenson has always been interested in politics and public affairs. In 1852 he supported the Whig nominee for President; in 1850 he peddled tickets all day in Chicago for Frémont, the first Republican nominee, and ever since he has contributed labor, time and money to the Republican cause. He has held many local and other offices, such as city councilor, supervisor, chairman of the county board of supervisors, member of the state assembly four years (1866-70) and nearly 20 years justice of the peace. It is said that he carried the office of justice around with him. When parties having differences chanced to meet him on the street, he settled their difficulties without making any record or charging any fees, so shrewd was he to detect the equities of human affairs and so upright in his acts and judgments. For many years, until he became «Uncle Ike,» he was addressed as «Captain,» because he had been master of lake craft. He took a leading part in organizing the county of Marinette and gave the land on which the court house and other county buildings were erected. He also donated lands and sometimes cash and lumber as well for new churches, and gave land for the Stephenson Training School (one of the very useful public institutions of northern

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Erie Dock Company, all of Pittsburg, the Bessemer Limestone Company of Youngstown, Ohio, and the Montreal Mining Company of Cleveland, Ohio.

Mr. Schiller is a member of the Duquesne Club, the Pittsburg Club, the Union Club, the University Club, the Allegheny Country Club, and the Pittsburg Golf Club, all of Pittsburg. His favorite recreations are golf, shooting, horseback riding and automobiling. He has also traveled extensively both at home and abroad. On June 6, 1900, he was married at Pittsburg, Pa., to Margaret Patterson Crosby, and they have two children: William Bacon, Jr. (b. November, 1902), and Frederic Crosby (b. August, 1905).

George Washington Jackson

George Washington Jackson was born at Chicago, Ill., July 21, 1861, the son of Thomas and Alice Jackson. He was educated in the Chicago public schools and at Oxford, England. In 1883 he began the practice of his profession in Chicago. Ten years later he was appointed consulting engineer for the city of Chicago in its study of the traction problem, and he was given the contract for the construction of a freight subway system, which has been pronounced one of the greatest engineering feats in the country. These tunnels were built to take care of the enormous freight traffic that had been a problem of the Chicago authorities for some time. In a district of the city a mile and a half square are thirty-eight railway stations, and nearly 200,000 tons of freight are moved to and from them daily. Previously this caused great congestion in the streets, until Mr. Jackson found a way to construct a series of tunnels made of concrete. At the same time it was planned to have spur tracks connect with the basements of the leading warehouses and stores in the city, and provisions were made for carrying coal to the large buildings and removing ashes therefrom and handling the United States mail. The tunnels of this system are enclosed in a concrete shell 14 inches thick at the bottom and 14 inches thick at the sides, which curve to the center overhead in the shape of a parabola. The dimensions are 12 feet 9 inches high and 14 feet wide for the trunk lines, 7 feet 6 inches high by 6 feet wide for the branch lines. The work occupied a period of 4 years, and the tunnel was opened for traffic in August, 1905.

Mr. Jackson has always been an advocate of the use of concrete. He is probably the leading authority on cement constructions in the United States, and the labyrinth of catacombs under the busy streets of Chicago will stand for many years as a monument to his genius and ability. He was consulting engineer for the city of Chicago in its study of the traction problem, and was the hydraulic engineer for the Chicago high pressure water commission. He is the inventor and owner of patents on interlocking steel sheeting, and is president of the Interlocking Steel Sheeting Company.

Among the more important works undertaken by him are the following: Section No. 3 of the Southwest land and lake tunnel; Blue Island avenue land tunnel; 28,350 feet of eight-foot tunnel for the department of public works, Chicago; the Dearborn street bridge for the sanitary district of Chicago; the water pipe tunnel, Chicago River, at Diversey boulevard, for the department of public works, Chicago; the Strickler tunnel, through Pike's Peak, 6,642 feet long; the Randolph street bridge, for the city of Chicago; the Polk street water tunnel, Chicago, length, 6,290 feet; the Wentworth avenue drainage system, Chicago, 5 to 11 feet in diameter, length 36,660 feet, average cut 33 feet; the foundation of the Halsted street bridge, Chicago; a 14-foot conduit, Reading, Pa., length, 12,600 feet; 55 miles of subway, Illinois Tunnel Company, Chicago; Sacramento avenue subway, Chicago; tunnel under river, La Salle street, Chicago Telephone Company, Chicago; foundation, Commonwealth Electric Company, Chicago; 15-foot storm-water conduit, Muscatine, Ia., length, 4,000 feet; Loomis street and Harrison street bridges, Chicago; electric light conduit system, South park board, Chicago; 94,000 feet of pneumatic tube system, Associated and City Press of Chicago; con duits for the Chicago Telephone Company, Western Union Telegraph Company, Postal Telegraph Company, Chicago Edison Company, Central Union Telegraph Company, Columbus, O.; the Twenty-second street bridge, Chicago; North pier for the United States government, Chicago; electric light conduit system, West park board, Chicago; North avenue bridge, city of Chicago; Eighteenth street bridge, city of Chicago; pile protection, Rogers Park street ends, Chicago; raising and reconstructing foundation under part of Marshall Field's wholesale building, Chicago; Torrence avenue bridge over Calumet river, Chicago; temporary swing bridge over Chicago River at North avenue, Chicago; steel sheeting, Chicago avenue pumping station, Chicago; conduits for the Central Union Telephone Company, Indianapolis, Ind.; 60 miles drainage system, Chicago; 46 miles track trolley and drainage system, Chicago Subway Company; two miles canal feeder for the Illinois-Mississippi canal, United States government; tunnel under river at Quarry street, Chicago Edison Company, and the Belmont avenue drainage system, Chicago.

He is a Shriner, Knight Templar, thirty-second degree Mason, and Elk, a member of the South Shore Country Club, Chicago Athletic Club, Illinois Athletic Club, Chicago Automobile Club, Press Club of Chicago, Academy of Sciences, Chicago Technical Club, and Western Society of Engineers. He was married in 1883 to Rose Theresa Casey, and has one daughter, Rose, and one son, Thomas Jackson.

John Welles Hollenback

John Welles Hollenback was born at Wyalusing, Bradford County, Pa., March 15, 1827, one of the eight children of Charles Fisher and Ellen J. (Hollenback) Welles. On the paternal side he is descended from an old English family, the first representative of which to arrive in this country was Thomas Welles, who came here about 1636. He is of German and Welsh descent on his mother's side. The family always bore their share of the burdens of the commonwealth and were as ready to fight for their homes against oppression by the Mother Country as against the ravages of the Indian savages. Thomas Welles, the first paternal ancestor to come here, was the fourth governor of the colony of Connecticut in which position he did much toward putting its government in good shape, and used his best endeavors to promote the interests of the colony. His grandfather on the maternal side, Colonel Matthias Hollenback, was a soldier in the Revolutionary army, was present at the battle or massacre of Wyoming, being one of those who were fortunate enough to escape, later became an associate justice and held other high offices.

The young man, after receiving a good elementary education, was sent to Athens Academy, Athens, Pa., where he studied during the years 1841-42, but he soon afterward entered business life in which he has been remarkably successful. From 1848 to 1863 he and his brother Edward had charge of the Welles estate at Wyalusing, Pa., but in the latter year John W. moved to Wilkesbarre, and at the request of his maternal uncle, George M. Hollenback, adopted his surname. Since 1872 he has been a director and since 1884 president of the People's Bank of Wilkesbarre, Pa.; is president of the Hollenback Cemetery Association, and of the Wilkesbarre Lace Manufacturing Company; is vice-president and a director of the Spring Brook Water Supply Company; and is a director in the Metropolitan Life Insurance Company, the Hazard Manufacturing Company, the Scranton Trust Company, the Title Guaranty and Surety Company, the Sheldon Axle Company, and many other corporations. He is also president of the Harry Hillman Academy, since 1865 has been president of the board of Lafayette College, and is vice-president and a director in the City Hospital. At one time he was very active and prominent in local political affairs and was a member of the city council. He has traveled extensively, has been in every state and territory of the United States except Arizona, and has also traversed large sections of Great Britain, Ireland, Germany, France, Switzerland, Italy and Mexico. Mr. Hollenback has been married three times: first on October 25, 1854, at Troy, Pa., to Miss Anna E. Beard, daughter of Eli Beard; second, December 13, 1866, to Miss Josephine Woodward, daughter of John Woodward; and third, June 18, 1874, at Suffern, N. Y., to Amelia Beard, daughter of Eli Beard, and the sister of his first wife. To him have been born nine children; Emily B., the wife of Dr. L. H. Taylor, Eleanor J., the wife of Murray Gibson of Philadelphia, Josephine W., the wife of Louis V. Twyeffort of Paris, Anna W., Amelia B., and Juliette G., all now living, and Walter, Samuel and Julia, who died in infancy.

Frederick Weyerhaeuser

Frederick Weyerhaeuser was born at Nieder-Saulheim, Hessen, Germany, November 21, 1834, the son of John and Katherine (Gabel) Weyerhaeuser. He received a thorough education in his native village and was taught by his parents to be steady, industrious and frugal. At the age of 18, not relishing the severe military requirements that faced him in Germany, he emigrated with his mother and sister to the United States and settled at Northeast, Erie County, Pa. He soon found work in a lumber yard as a day laborer and remained there for four years, saving what he afterwards described as "a very small bunch of money." In 1856 he removed to Coal Valley, Rock Island County, Ill., where he engaged in the lumber, grain, and coal business on a branch line of the Rock Island and Pacific Railway near inexhaustible fields of soft coal. Frank C. A. Denckmann, who became his brother-in-law, was an employee of the Rock Island saw-mill, so in 1860, when the mill property with its splendid frontage and boom area on the Mississippi river was offered for sale the brothers-in-law jointed interests under the style of Weyerhaeuser and Denckmann, and bought the property, giving notes for a large portion of the purchase money.

The logs for the Rock Island mills at this time came down the Mississippi River, mostly from Wisconsin. They were handled by a combination known as the Beef Slough Company, which drove, assorted, boomed and delivered logs for all of the mills on the Mississippi and the profits of the Rock Island business, therefore, except those of sawing and from the by-product, went to others. This feature did not suit Mr. Weyerhaeuser, who proceeded to Wisconsin while his partner managed the mill, and began purchasing tracts of the

J. W. Hollenback

magnificent stand of yellow pine that grew in the valley of the Chippewa River and its tributaries. These acquisitions entitled his firm to representation in the Beef Slough Company, now the Mississippi River Boom and Logging Company, which gave employment to from 16,000 to 20,000 persons at the height of the season. As nearly all of the streams that were suitable, or could be made suitable for driving logs and rafting lumber had been already wholly or partly improved and were occupied by other lumbermen, independent operations on them were practically impossible. Mr. Weyerhaeuser began systematically to acquire interests in mills that were in active operation and holdings of standing timber jointly with others —buying, when he could, the controlling interest but never changing the firm name. This policy has been steadily followed for more than 35 years.

In 1872 he was elected president of the Mississippi River Boom and Logging Company, then the largest concern of its kind in the world; a coöperative monopoly of logging operations on the Mississippi on a scale that was stupendous. In 1879 the Chippewa Lumber and Boom Company was organized with Mr. Weyerhaeuser as president. Their mill, driven by the great water power at Chippewa Falls, Wis., was for many years the largest in the world. In it were installed several new devices for manufacturing and handling by-products and it was the first mill in which as many as five gangs of 100 saws, in addition to the rotaries and other machines, were operated on a single floor. Shortly before this time he had acquired the enormous plant of the Nelson Lumber Company at Cloquet, Minn., near the head of Lake Superior, which carried with it 600,000,000 feet of standing timber on fine logging streams.

To attempt to follow out individually his purchases and operations from this time forward would be burdensome. He continued to reside quietly at Rock Island and only the vaguest notions of what he was doing ever reached the public. Each center of his operations was in charge of a competent manager or corporation, manned by persons of tried strength and skill, and the operators in one center made no effort to find out the details of operations at other centers. As new timber areas began to be opened throughout the west Mr. Weyerhaeuser organized a regular timber purchasing corporation known as the Weyerhaeuser Timber Company, capitalized at $12,500,000, with headquarters at Tacoma, Wash., in charge of Robert L. McCormick, one of his former partners. Outside of this timber company is what is called the "Weyerhaeuser Syndicate," whose holdings in standing timber would cover the entire state of New York and in which Mr. Weyerhaeuser has literally thousands of partners, many of them men of great wealth. He also owns, or is heavily interested in more than 20 sawmills, some of them of enormous capacity. The mill at Potlatch, Letah County, Idaho, is regarded as the finest plant ever built, and there are several others, especially one at Tacoma, which are not far behind in equipment or capacity. In these 30 mills more than 2,500 saws, in gangs, are turning out daily over 7,000,000 feet of lumber and vast quantities of lath, shingles, kindlings, box stock, packed saw-dust and other by-products, the profits on which are estimated to average from $800,000 to $1,000,000 per year.

Besides these his interests extend to numerour dams, factories, warehouses, planing mills and improvements, and he owns or is a director or stockholder in many banks. He is president of the National German-American Bank at St. Paul, in which he maintains a modest office for the general supervision of his great business. He is president of the Mississippi River Boom and Logging Company, the Potlatch Lumber Company, the Weyerhaeuser Timber Company, the Weyerhaeuser Syndicate, the Chippewa Lumber and Boom Company, the Cloquet Lumber Company, Tacoma Lumber Company, the Little Falls Lumber Company, the Mississippi River Logging Company, the Northland Pine Company, the Pine Tree Lumber Company, the Musser-Sauntry Company, St. Croix Lumber Company, the Shell Lake Lumber Company, the North Wisconsin Lumber Company, the Chippewa Valley Logging Company, the Bonner's Ferry Lumber Company, the Superior Timber Company, Weyerhaeuser and Dinckmann, Weyerhaeuser and Rutledge Lumber Company, Duluth and Northeast Railway, Mesabe Southern Railway, and has large holdings in the Atwood Lumber Company, the Rutledge Lumber Company, the Nebogamon Lumber Company, and in boats, rafts and railways for handling lumber, as well as machine shops, stump lands, farms and other property. He may be called the king of the world's lumber and timber business, being the heaviest mill and timber owner in the world, though very little of his property appears on record in the name of Weyerhaeuser.

In 1891 he moved to St. Paul, where, on beautiful Summit avenue, he lives a quiet and secluded life. He attends no public gatherings and keeps out of politics and the public prints. He is quaint in his manner, speaks with a German accent, and is democratic, pleasant and kind-hearted. He is a member of the Minnesota and Town and Country clubs of St. Paul. He was married at Coal Valley, Ill., October 11, 1857, to Elizabeth, daughter of Henry F. Bloedel, also of German descent, and has two sons: Frederick E. and John P. Weyerhaeuser.

Benjamin LaFon Winchell

Benjamin LaFon Winchell was born at Palmyra, Mo., July 8, 1858, a son of J. Rice Winchell, an able editor, and Kate Anna (LaFon) Winchell. The ancestors on the paternal side were from Massachusetts, of English progenitors, who came to the United States in 1649. On the maternal side they were from Virginia, the LaFon family coming from France about 1730. He obtained his education in the Hannibal, Mo., public schools, and graduated from the high school in June, 1874. His first occupation was as "handy boy" in the shops of the Hannibal and St. Joseph Railroad at Hannibal, Mo. His rise was more than rapid, in fact, it was remarkable, the promotions occurring in the following order: from handy boy to clerk in the office of the auditor of freight accounts of the same road, then clerk in the office of the general auditor. Mr. Winchell next was clerk in the general freight office of the Atchison and Nebraska Railroad, and then clerk in the office of the master of transportation. He then became connected with the K. C. M. and G. Railroad, at Kansas City, as chief clerk in the general passenger agent's office and was then advanced to the office of assistant general passenger agent.

From May, 1895, to April, 1898, he was the general passenger agent of the U. P. D. and D., L. and G. R. roads, and from April to November, 1898, he was the general passenger agent of the St. Louis and San Francisco Railroad at St. Louis, Mo. From December, 1898, to January, 1899, he was the general traffic manager of the U. P. D. and G. Railroad, and from January, 1899, to October, 1900, was vice-president of the Colorado and Southern Railroad. From October, 1900, to July, 1901, Mr. Winchell was president of the Kansas City, Fort Scott and Memphis Railroad with headquarters at Kansas City. From July, 1901, to October, 1903, he was vice-president and general manager of the St. Louis and San Francisco Railroad. From October, 1903, to March, 1904, he was third vice-president of the Rock Island Lines, and was made the president of that road in March, 1904, which office he resigned in December, 1909, to accept the presidency of the Frisco Lines. At present Mr. Winchell is connected with the following railroads: St. Louis and San Francisco Railroad Company, Chicago and Eastern Illinois Railroad Company, Evansville and Terre Haute Railroad Company, St. Louis, Brownsville and Mexico Railroad Company, and the New Orleans, Texas and Mexico Railroad Company.

Mr. Winchell is a member of the Chicago, the Saddle and Cycle, the Onwentsia, and the Chicago Golf clubs of Chicago, also of the Racquet and St. Louis Country clubs of St. Louis, of the Kansas City Country Club of Kansas City, of the Denver Club of Denver, Col., and of the Pickwick Club of New Orleans, La. He was married on September 5, 1880, to Jeanette Helm, at Hannibal, Mo., and has one son, Benjamin La Fon Winchell, Jr.

Abbott Lawrence Lowell

Abbott Lawrence Lowell was born at Boston, Mass., December 13, 1856, the son of Augustus and Katherine Bigelow (Lawrence) Lowell. His first American ancestor was Percival Lowell, who sailed in the Jonathan from Worcestershire, England, in 1639, and settled at Newbury, Mass. The line of descent is traced through his son John; his son John, who married Hannah Proctor; their son Ebenezer, who married Elizabeth Shailer; their son Rev. John, who married Sarah Champney and was the first Lowell to graduate at Harvard College (1721); their son John, who married Sarah Higginson; their son John, who married Rebecca Amory; their son John Amory, who married Susan C. Lowell, and their son Augustus, who was the father of the subject of this sketch. Hon. John Amory Lowell was the first trustee of the Lowell Institute and Judge John Lowell was a direct ancestor of Francis Cabot Lowell, one of the chief founders of cotton manufacturing in Massachusetts; of John Lowell, Jr., the founder of Lowell Institute, and of James Russell Lowell, the poet. President Lowell's mother was a daughter of Abbott Lawrence, at one time United States minister to England.

Abbott Lawrence Lowell was graduated at Harvard University in the class of 1877. He was especially proficient in mathematics and also distinguished himself in athletics, having won on one occasion both the mile and three-mile race in the same afternoon. After two years at Harvard Law School and one year in the law office of Messrs. Russell and Putnam of Boston he received the degree of LL.B. in 1880. He was immediately admitted to the bar, and for years practiced law in partnership with his kinsman Francis Cabot Lowell, Frederick Jesup Stimson being a member of the firm during the last six years. Retiring from the bar in 1897, he became lecturer at Harvard University and two years later was appointed professor of the science of government. He filled this chair so acceptably and displayed such qualities of business ability, tact and executive force that when President Eliot resigned in 1909 he was selected by the corporation to succeed him. In his inaugural address

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on October 6, 1909, President Lowell said: «A discussion of the ideal college training would appear to lead to the conclusion that the best type of liberal education in our complex modern world aims at producing men who know a little of everything and something well.» Soon after taking office he introduced a radical change in Harvard's elective system by abandoning the plan of unlimited electives and providing for a considerable amount of work by the student in some one field and the general distribution of other subjects under the direction and advice of the faculty.

His writings have won him international recognition as one of the few high authorities on the history and science of government in the English-speaking world. They are: 'Transfer of Stock in Corporations,' in collaboration with Judge Francis C. Lowell (1884); 'Essays on Government' (1889); 'Governments and Parties in Continental Europe' (1896); 'Colonial Civil Service,' in collaboration with Professor H. Morse Stevens (1900); 'The Influence of Party upon Legislation in England and America' (1902); and 'The Government of England' (1908). From the moment President Lowell began his teaching at Harvard he impressed both students and colleagues with his forceful personality. His elementary course in government was considered the most stimulating line of instruction, as well as the most popular, given to undergraduates. He was a member of the Boston school committee and the executive committee of the Massachusetts Institute of Technology, and is now a member of the Massachusetts Historical Society, the American Academy of Arts and Sciences and the Phi Beta Kappa fraternity. President Lowell has been trustee of the Lowell Institute of Boston since 1900. In that capacity he has the full financial management of the trust, selects the lectures and in all ways carries on the affairs of the Institute in the service of public education. He was married June 19, 1879, to Anna Parker, daughter of George G. Lowell of Boston, also a descendant of the above mentioned Judge John Lowell.

Henry Gordon Stott

Henry Gordon Stott was born in the Orkney Islands, off the northern coast of Scotland, May 13, 1866, the son of the Reverend David and Elizabeth Jane (Dibblee) Stott. He received his early education from his father, who was a highly cultured man, and also attended the public schools of his home town. He then took a course at the Watson College Schools, Edinburgh, and subsequently entered the College of Science and Arts, Glasgow (now the Glasgow and West of Scotland Technical College) where he studied mechanical engineering and electricity, graduating in the class of 1885.

Having secured an education he proceeded to gain some practical experience, at first being employed in the engine and boiler room of an electric light company at Glasgow. He then accepted a position as assistant electrician on the steamship Minia, owned by the Anglo-American Telegraph Company, where for four years and a half he most acceptably performed the difficult duties attendant upon such employment. Beside assisting in repairing the deep sea cables in the Atlantic he also did much independent experimental work on various methods of locating faults in submarine cables. He also did similar work in connection with duplexing the main cable of the United States Cable Company, at that time the largest cable ever duplexed (2,750 knots).

In 1889, however, he decided to make a change and, resigning his position, he accepted employment as assistant engineer in the electric light plant of the Brush Electric Engineering Company at Bournemouth, England. But he remained there for the short period of a year only, and in 1890 went to Madrid, Spain, as assistant engineer on a power plant, underground cable and installation work for the Cia. Inglesea de Luz Electrica. This work was brought to a rapid completion and for a few months he was again in the employ of the Brush Electric Engineering Company. In September, 1891, he came to the United States to take charge of the work of installing an underground conduit and cable system for the Buffalo Light and Power Company (later the Buffalo General Electric Company) and his successful performance of the difficult task not only entirely satisfied the officials of the company but was the means of gaining for him wide recognition and an enviable reputation as an exceedingly able electrical engineer. This work also earned for him the appointment of engineer to the company and during the next 10 years he had full charge of all the most important construction work undertaken by that company in Buffalo, including the designing and construction of the new power plant on Wilkeson Street.

With a reputation that was now international Mr. Stott began to reap the reward of patient labor and hard work, and his services were sought by many large corporations. At last on March 1, 1901, he accepted the offer of the Manhattan Railway Company of New York to become superintendent of the new department of motive power, and soon had the operating force organized and running in smooth shape. In this position he also had charge of the completion of the power plant, sub-station and transmission lines at Seventy-fourth Street. In 1904, the Manhattan Railway was leased to the Interborough Rapid Transit Company, but this in no way affected Mr. Stott, as he was requested to remain in the position of superintendent of motor power with the new company. The erection and construction of the power

talization, but are determined by economic forces independent of railroad management.

In December, 1906, shortly after the tragic death of President Samuel Spencer, Mr. Finley was elected to succeed him. The system of which he thus became the head serves the District of Columbia and the states of Kentucky, North and South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi, Missouri, Illinois and Indiana, with a total mileage of 7,212 miles. For the year ending June 30, 1909, its total earnings were $52,941,716; its operating expenses were $39,854,722, and net earnings $13,086,994. It ranks, therefore, as one of the great railroad systems of the country, and calls for a high order of administrative ability. Since Mr. Finley's appointment to the presidency, he has consistently worked to identify railroad extension in the South with that region's development and supremacy in certain lines of manufacturing; and he has sought, in opposition to sectional interests that would ally the railroad with politics or organize political hostility to them, to win the people of the South to a generous though discriminating support of the railroad as indispensable to the welfare of the community.

Mr. Finley is also president of the Mobile and Ohio Railway Company, the Cincinnati, New Orleans and Texas Pacific Railway Company, the Alabama Great Southern Railroad Company, the Georgia Southern and Florida Railway Company, the Virginia and Southwestern Railway Company, and the Northern Alabama Railway Company, and a director of the Chicago, Indianapolis and Louisville Railway Company, the Old Dominion Steamship Company, and other corporations.

The degree of LL.D. was conferred upon him both by Tulane University and the Kentucky State University in 1910. He was married at Pass Christian in 1883, to Lillie Vidal Davis, by whom he has five children: William Wilson, Jr., Lottie V., Lillie B., Leonora M., and Celestine P. Finley.

William Henry Moore

William Henry Moore was born at Utica, N. Y., October 25, 1848, the son of Nathaniel F. and Rachel A. (Beckwith) Moore, both of whom were natives of New York state. The family was resident in New England in early colonial days, and his father was a well-known and highly respected merchant of Utica, who died in 1890. The son of well-to-do parents, young Moore had the best educational advantages. He attended the seminary at Oneida and the Cortland Academy at Homer, N. Y., and then entered Amherst College in 1867, but was compelled by sickness to give up his studies before graduation. While in search of health he visited Wisconsin, and deriving benefit from the climate, settled temporarily at Eau Claire. Here he began to study law in the office of W. P. Bartlett, and in 1872 was admitted to the bar. His first practice was in the office of Edward A. Small, a corporation lawyer of Chicago, and shortly afterwards he entered into a partnership with him which continued until Mr. Small's death in 1881. He then formed a partnership with his younger brother, James Hobart Moore, who recently had been admitted to practice. The firm soon became known as one of the best and most successful at the Chicago bar, numbering among its clients such well-known firms as the American Express Company, the Adams Express Company, the Merchants Dispatch Transportation Company, the Vanderbilt Fast Freight Line, and similar leading business houses and wealthy corporations of Chicago. During the earlier years of his career Mr. Moore was the chief trial lawyer of the firm, and was in court continually. Combining with an intimate knowledge of fundamental and statute law great natural sagacity, and constantly exercising the most scrupulous care in preparing his cases, he rarely failed of success.

Mr. Moore soon began to develop rare powers of organization, and in the recent history of the great movement for industrial centralization, as the head of the law firm of W. H. and J. H. Moore, his achievements place him among the greatest financiers of the country. He was one of the principal projectors of the Diamond Match Company, organized in 1889 from a Connecticut corporation with $3,000,000 capital to an Illinois corporation with $6,000,000 capital. In 1890 a combination of eastern cracker factories was made under the name of the New York Biscuit Company, capitalized at $10,000,000. The brothers were the leading spirits in the management of the match and biscuit companies until 1896, when owing to the depreciation of the stock of these companies, the firm failed for several million dollars. It was evident to everybody that the brothers had lost nothing but their money, that their confidence in themselves and their hearty competent grip upon life were unimpaired, and they immediately addressed themselves to the reshaping of their fortunes. Their creditors had such confidence in their ability to recover that the firm was not formally declared insolvent or put into bankruptcy. It is said that the settlements were on the debtors' own terms. To quote an article in 'Everybody's Magazine':—"William H. Moore especially has that gift of power upon men which no one can quite analyze or define. He has a remarkably able mind and a remarkable facility of movement. He is at once quick and sure, urbane and firm. * * * But above all else, that ready, competent, imperturbably good-humored attitude of both the brothers counted. It seemed

so inevitable that men whom failure could not daunt were again to command success.» Mr. Moore soon demonstrated that this confidence was justified, and the brothers surprised the business world by the promptness with which they liquidated all their obligations.

About this time a fierce trade war was begun between the New York Biscuit Company and the American Biscuit Manufacturing Company, a rival combination formed of Western cracker makers, and the outcome of the strife was the consolidation of these two companies and the United States Baking Company into one company, the National Biscuit Company in 1898. In December of the same year the Moores promoted and organized the American Tin Plate Company; in February, 1899, the National Steel Company, and in April, 1899, the American Steel Hoop Company. All of these companies were consolidations in the steel trade, early transactions that were to lead up finally to the present United States Steel Corporation. In May, 1899, they proposed to take over the Carnegie Steel Company, capitalized at $625,000,000, but the time was not ripe for such a huge capitalization. They next bought out the American Sheet Steel Company, with $49,000,000 capital, and in March, 1901, the American Can Company, with $88,000,000 capital. Meanwhile, Mr. Moore's idea of a gigantic merger of steel and iron interests was gaining adherents, and negotiations were continued from time to time until an agreement was signed in New York, February 23, 1901, by the representative of a syndicate, headed by J. Pierpont Morgan, to finance the deal. This was the origin of the United States Steel Corporation, which took over, among other concerns, the American Tin Plate Company, the National Steel Company, the American Steel Hoop Company, and the American Sheet Steel Company, controlled by Mr. Moore.

In 1901 the sphere of their operations was further widened by acquiring control of the Chicago, Rock Island and Pacific Railway, his associates in the transaction, besides his brother, being Daniel G. Reid and William B. Leeds. This was the beginning of the railroad career of the men now known familiarly in Wall street as the «Rock Island crowd.» By the end of that year Mr. Moore and his associates had assumed control of the railroad, and began to carry out a series of railroad transactions that rivaled the most ambitious undertakings of James J. Hill or Edward H. Harriman. By the purchase of the Choctaw, Oklahoma and Gulf Railroad, the leasing of the Burlington, Cedar Rapids and Northern, the acquisition of the St. Louis and San Francisco system, and other additions, the Rock Island road was increased from 3,600 miles and a property value of $116,000,000 in 1901 to about 15,000 miles at a total valuation of $900,000,000, in 1907, and the Rock Island became as much of a «Moore» road as the New York Central was ever a «Vanderbilt» road. While the powers in command had extended to others than the Moore brothers, unquestionably the guiding spirit and chief of them all was William H. Moore. Since 1900 his office has been in New York City.

Mr. Moore is a director of the Delaware, Lackawanna and Western Railroad, the Rock Island Company, the Chicago, Rock Island and Pacific Railway Company, the St. Louis and San Francisco Railroad Company, the Chicago and Eastern Illinois Railroad Company, the Chicago and Alton Railroad Company, and other railroads. He is also a director of the United States Steel Corporation, the American Can Company, the National Biscuit Company, First National Bank of New York, and Fidelity Fire Insurance Company, of New York. He is a member of the Metropolitan Club, the Union League Club, Lawyers' Club, Downtown Club, Army and Navy Club, Racquet and Tennis Club, New York Yacht Club, and Garden City Golf Club of New York, the Myopia Hunt Club of Massachusetts, the Calumet and the Chicago clubs of Chicago, and the New York Chamber of Commerce.

Outside his business, Mr. Moore finds keen enjoyment in his stable of harness horses, of which he has one of the finest collections in the world. He was married at Chicago, Ill., in 1879, to Ada, daughter of his first law partner, Edward A. Small, and had three sons: Hobart Moore, who died in 1903, Edward Small, of St. Louis, and Paul Moore.

Herman A. Metz

Herman A. Metz was born in New York City October 19, 1867, the son of Edward and Frances Metz. He was educated in the public schools of New York and later attended the high school of Newark, N. J., and at the age of 14 years entered upon a business career as office boy with P. Schulze-Berge, founder of various firms which subsequently became the corporation of Victor Koechl and Company, dye and chemical importers. He had no intention of remaining at the foot of the ladder as he was possessed of extraordinary ambition, and he therefore took up a course of chemistry in the evening classes at Cooper Union where he was graduated with honors.

Having now fitted himself for a more responsible position with the firm, he at first was appointed laboratory assistant, but his hard work and efficient services gradually won him promotion successively to clerk, city salesman, traveling salesman, manager of the Boston office and finally manager of the important western territory with headquarters in Chicago. In 1893 the business was incorporated under the name of Victor Koechl and Company and Mr. Metz became vice-president and treasurer of the company, at that time being only 27 years of age. Six years later, in 1899, he became president and virtually the owner of the enterprise. In 1903 it was decided to separate

the pharmaceutical branch of the business from the chemical and dye-stuff departments, and for that purpose the firm of Herman A. Metz and Company was organized and incorporated, taking over the chemical and dye-stuff departments. In order to carry on the manufacture of various chemicals Mr. Metz organized the Consolidated Color and Chemical Company, composed of the same interests, he being president of this company also. The factory of this company is situated on the shore of the Passaic River in Newark, N. J. Beside the main offices in New York City H. A. Metz and Company have offices in Boston, Providence, Philadelphia, Atlanta, Ga., Charlotte, N. C., Chicago, and San Francisco, at Montreal and Toronto, Canada, and at Hamburg and Frankfort-on-the-Main, Germany. He is also president of the present corporation of Victor Koechl and Company which handles synthetic drugs and pharmaceutical preparations; is president of the Stoneville Company which owns the land, real estate and water rights and the village of Stoneville, in the town of Auburn, Mass., and is the sole owner of the Ettrick Mills, makers of rugs and carpets, the works of which are located at Stoneville. He is a director of the Guardian Trust Company and the Germania Savings Bank of Brooklyn. In all his various enterprises Mr. Metz has endeavored to reduce the operations of those under him to a scientific basis so that the responsibility of every act can be exactly fixed and this capacity for organization has enabled him to devote a portion of his time to political affairs and affairs of a similar nature.

Politically Mr. Metz is a Democrat and was one of the founders of the Kings County Democratic Club, of which he has acted as president since 1903; he was also president of the National Civic Club of Brooklyn of which he was at one time treasurer; was formerly president and is now vice-president of the Brooklyn Democratic Club; and is a trustee of the Reform Club and of the National Democratic Club of New York. He was a candidate for alderman and for Congress on the Independent Democratic ticket; was a delegate to the national Democratic convention at Indianapolis in 1896 and to the convention at St. Louis in 1904; and in 1905 was elected Comptroller of New York City on the ticket headed by George B. McClellan, during his term of office of four years introducing many reforms in the methods of handling the financial affairs of the city and so conducting himself in the management of his office as to earn the warm approbation of all regardless of party affiliations. Mr. Metz has also served the city in various other capacities, having been a member of the school board of Brooklyn and after the consolidation of the various boroughs into Greater New York, as a member of the Board of Education of Greater New York, under appointment of Mayor Van Wyck, and was reappointed to the New York Board of Education by Mayor McClellan just before his term of office expired. He is also a trustee of Adelphi College and the Brooklyn Academy of Music. Governor Hughes appointed him a member of the charter revision commission.

Mr. Metz is a member of numerous organizations both commercial, social and athletic. Among the former are the Manufacturers' Association, of which he is vice-president, the National Association of Manufacturers, the Merchants' Association of New York, of which he is a director, the Board of Trade and Transportation, the New York Chamber of Commerce, the American Chemical Society, the Electro-Chemical Society, the Brooklyn League, the Chemists Club of New York, the Wool and Drug clubs of New York, the Society of Chemical Industry of London, England, and the Deutscher Chemiker Verein, of Dresden, Germany. Among the latter are the Germania, Bushwick, Lincoln, Hanover. Montauk, Crescent Athletic, Parkway Golf, Riding and Driving, Long Island Kennel and Manhattan Cricket clubs of Brooklyn, and the Manhattan, City, Lotus, Reform, Democratic, Pleiades, Salmagundi, Thirteen, Army and Navy, Riding and Driving and New York Athletic clubs of New York. He is a 32d degree Mason, belonging to the New York consistory, and the representative of the Grand Lodge of North Carolina in the Grand Lodge of New York, a member of the Palestine Commandery and Mecca Temple of the Mystic Shrine of New York, a member of the Commonwealth Lodge 409 of Brooklyn, Jerusalem Chapter 8 and Adelphia Council 7. He is a member of the Gilbert Council of the Royal Arcanum and Captain and Commissary of the 14th regiment of the New York National Guard. In 1891 he was married to Laura A. Traut, of Newark, N. Y.

Elmer Ellsworth Brown

Elmer Ellsworth Brown was born at Kiantone, Chautauqua County, N. Y., August 28, 1861, the son of Russell McCrary and Electa L. (Sherman) Brown. His first American ancestor on the paternal side is believed to be Benjamin Brown, whose name first appeared in Connecticut records of the middle of the Eighteenth century. From him the line of descent is traced through his son Thomas, who married Adah Mudge, their son Daniel, who married Molly Stedman, and their son Alvah who married Eunice Eddy, and who was Mr. Brown's grandfather. He also traces descent from a number of the Pilgrim fathers, including William Molines, Samuel Eddy, Miles Standish and John Alden. Young Brown learned his letters at the age of two and a half years, and very early developed a fondness for

reading and study. When only seven years old he was browsing through books on history, botany, astronomy and physics in his father's collection. He began his education in the public schools at the age of eight, and five years later passed the county examination for a teacher's certificate, standing at the head of the list of competitors. He took the full course at Illinois State Normal University, where he was graduated in 1881; but meanwhile he had begun his career as a school teacher in 1878, first as principal of the public school at Rockport, Ill., and in the following year as teacher in the high school at Astoria. Upon leaving the State Normal University, young Brown was appointed principal of the South Side schools at Belvidere, Ill. While in this position he first manifested his genius for organization, being instrumental in forming the Northern Illinois Teachers' Association. Having determined to make his life-work the science of pedagogics, he matriculated at the University of Michigan in 1887, and having received advanced standing, completed the entire four years' course in two years, and received his B. A. degree in 1889. He also attended the University of Halle (Germany), and with the same uncommon zeal and speed he mastered the German language, which he had already studied at home. He wrote his thesis in German, and secured his degree of Ph.D. in 1890. Returning to the United States to resume his professional teaching, he was first principal of a high school at Jackson, Mich., and within a year was called to the University of Michigan as acting assistant professor of the science and the art of teaching. His success in higher education was immediate, and when, in 1892, the University of California created a new chair of education, its occupancy was offered to Dr. Brown, under whose strong, tactful leadership it became one of the most important departments in the university. His influence was felt in every grade of the schools of the state. Not only in the work of the schools did he stand for definite ideals of progress and efficiency, but for the teachers themselves he labored, and labored successfully, to make their profession as dignified as that of law or medicine. The influence of his administrative ability was soon felt beyond the confines of the state, so that when Dr. William T. Harris retired as commissioner of education in 1906, President Roosevelt could appoint no one better fitted to take his place than Dr. Brown.

In the furtherance of his work Dr. Brown's activities were chiefly directed towards promoting freedom in organization and control of state school systems. He labored for state aid in the maintenance of the high schools, and for the appointment, retention and promotion of teachers on the basis of professional fitness alone. Standing as he does for the most modern and improved methods in the science of education, it will not be out of place to enumerate some of the newest lines of advancement in the educational world: the development of trade schools, resulting in the organization of the National Society for the Promotion of Industrial Education in 1906; measures for the improvement of rural education, resulting in the establishment of agricultural high schools in various states, and in the introduction in Congress of bills for national aid along this line; the training of women for the specific duties of the home, which is further advanced in European countries than in the United States, where as yet there have been one or two mothers' congresses and an international congress on the welfare of the child, held in Washington, and as a result of this training of mothers a recent growth of organizations for bringing the school and the home nearer together; the movement for the combination of apprenticeship with technical study of collegiate grade; more attention to individual training, and international education as is exemplified in the exchange of professors and teachers of foreign institutions with those at home. In 1910 Chancellor Henry M. McCracken of New York University retired after many years of labor in behalf of that institution and a committee was appointed to select his successor. They decided upon Dr. Brown as the one best fitted to carry out to a successful conclusion the plans and policies of Dr. McCracken and in April, 1911, announcement was made that Dr. Brown had accepted the offer of the committee to become chancellor of the university.

Dr. Brown is a member of the National Education Association, the National Council of Education, of which he was president during 1904-07, and a fellow of the American Association for the Advancement of Science. He is also a member of the Advisory Council of the Simplified Spelling Board, the Advisory Board of the National Congress of Mothers, the American Committee of the Third International Congress for the Advancement of Drawing and Art Teaching, and the Federal Schoolmen's Club. Dr. Brown has always taken an interest in religious organizations and progress. After leaving the normal school he became assistant secretary of the Young Men's Christian Associations of Illinois, of which his brother, Isaac E. Brown, was and still is the state secretary, and that experience resulted in the organization of the system of corresponding membership, which was afterwards widely extended and adopted almost universally among the Christian Associations. He is a member of the Religious Education Association and its vice-president in 1908, and was for some years a trustee of the Pacific Theological Seminary of the Congregational Church.

Dr. Brown has written a large number of articles for educational magazines, and is the author of 'Notes on Children's Drawings' (1897); 'Secondary Education' (1900); 'The Making of Our Middle Schools' (1903), which is a recognized authority on the history and organization of our secondary schools, and 'Origin of American State Universities' (1905). Said a writer in the 'Southern Educational Review': "Kindliness and gentleness are as much a part of his character as are honesty and scholarship. Through all his seriousness a rich vein of humor runs, and it is always ready to crop out in sparkling wit. In spite of all his strenuous activity and the countless demands upon his attention, he is never too busy to stop and lend assistance to the youngest and most obscure teacher or to the student seeking help. In spite of his attainments he is almost painfully modest and

retiring, and with all his force and power and inflexibility in what he is convinced is right, he is tactful and gentle and considerate far beyond the ordinary run of men. No one will ever know how many students he has helped with advice or money or to positions after they have left college. His lovable nature and his ever-ready helpfulness make all men his friends." Dr. Brown was married June 29, 1889, to Fanny Fosten, daughter of Rev. Zachary Eddy, D. D., one of the most noted preachers of Michigan.

William Miller Sperry

William Miller Sperry was born at Bristol, Va.-Tenn., September 14, 1858, one of the seven children of Jacob Austin and Susan Butler (Langley) Sperry. He is of German-English extraction, the first member of the Sperry family to settle in the country being Peter Sperry, who came here about 1737. Mr. Sperry's great-grandfather was a member of General Daniel Morgan's regiment of Rangers, known as "Morgan's Dutch Mass," who during the Revolutionary War were attached to the expedition of Richard Montgomery and Benedict Arnold, undertaken for the purpose of capturing Quebec, Canada. The city was to be attacked simultaneously from three different quarters, but owing to the failure of the troops to act in concert the American forces were repulsed; Montgomery was killed, Arnold wounded, and Morgan, upon whom the command devolved, after penetrating to the centre of the city, was surrounded and compelled to surrender with his men, among whom was Sperry. Jacob Austin Sperry, the father, was a physician by profession, was also an exceedingly able editor and in addition was a well-known writer in the Confederate cause at the time of the Civil War, during which he suffered imprisonment at Knoxville, Tenn.

The early educational training of William M. Sperry was obtained in the public schools of Plainfield, N. J., and in 1873, when only 15 years of age he entered business life as a clerk in a Wall Street house, where he remained for two years. In 1876 he became a salesman for a wholesale hardware house and continued in its employ until 1893 when he determined to engage in the same business for himself, in that year organizing the Sperry and Alexander Company, with which firm he has since continued to act in the capacity of vice-president. Since 1896 he has been a member of the Sperry and Hutchinson Company, and also holds the same position in this company that he occupies in the first named. In addition he is a director of the Cranford National Bank of Cranford, N. J., and the Cranford B. & L. Association.

Mr. Sperry is a member of the Sons of the Revolution, the Metropolitan Museum of Art, the Museum of Natural History, the New York Botanical Garden, the Aldine Society, and the Hardware, New York Athletic, Masonic, and Knickerbocker Whist clubs. He is a thirty-second degree mason and a member of the Shrine, and also belongs to the Benevolent Protective Order of Elks. He is affiliated with the Episcopalian Church and is a vestryman of Trinity Church, Cranford, N. J. His principal recreations are boating and fishing and he has also traveled extensively both in the United States and in Europe. He has been married twice: first on March 19, 1890, at New York, to Caroline Whitehead; and second on September 13, 1897, at Chicago, to Emily L. Mooney. He has four children: Carrie R., Dorothy, Virgina, and Emily.

George Frederick Vietor

George Frederick Vietor was born at Brooklyn, N. Y., October 13, 1839, and died at New York City January 29, 1910, in the 71st year of his age. He was one of the eight children of a prominent dry goods merchant of New York, his father, Frederick Vietor, as a member of the firm of Frederick Vietor and Achelis, having for many years been one of the most successful of the many merchants engaged in that business. This firm was founded in 1825 by Charles Graebe but in 1828 Mr. Frederick Vietor became partner and the firm name was changed to Graebe and Vietor. This partnership continued until 1838 when Mr. Graebe retired from the firm and for the next two years Mr. Vietor conducted the business himself. In 1840, at the end of that period, Thomas Achelis, an uncle of George F. Vietor, joined Mr. Vietor and since that time the business has been carried on under the name of Frederick Vietor and Achelis. In 1870 Mr. Vietor died and two years later his son George succeeded to the management of the affairs of the company.

George Frederick Vietor, after a short preliminary schooling in this country, went to Germany and passed the early years of his life in the city of Bremen. There he received his

first mercantile training, which necessarily was after German methods, but at the age of 18 years he returned to the United States and immediately embarked in business. A few years of experience in American methods, supplementing the careful training he had received in Germany, were sufficient to fit him for carrying out to a successful conclusion the plans his father had laid out for him. Consequently in 1865, when his business education had been completed, the young man was allowed to become a partner in the firm of which his father was the head, but the pleasant associations of father and son were not destined to be of extended duration as the father died in 1870, only five years after George was admitted.

This left a vacancy that was hard to fill and for two years the firm conducted business under the arrangements existing at the time of Mr. Vietor's death but in 1872 after careful consideration the son was placed in control of the firm's affairs and continued to conduct the business until his death in 1910. When first opened the firm conducted an import business almost exclusively but gradually the commission side developed until it became the more important. In this movement Mr. Vietor was the leading spirit and so successful was he that during the last few years of his life the annual sales of the firm amounted to between $40,000,000 and $50,000,000. Aside from its various branches in New York City the firm also conducted branch establishments at Bremen, Chemnitz, Paris and Lyons.

Mr. Vietor was a splendid example of the German-American type of business man. His methods were clean and upright, his decisions quick and his judgment remarkably keen and accurate, and these qualities, combined with an extraordinary ability to divine the financial responsibilities of a man or company even when the reports of credit agencies contradicted his views, greatly aided him in expanding and developing his business. He was always deeply interested in the minor details connected with his various enterprises and was endowed with a wonderful faculty for grasping and retaining in his mind all the facts connected with each of his business dealings. In spite of the enormous extent of the business which he transacted each day Mr. Vietor was always accessible and his views were frequently and eagerly sought by those within and without the trade. He was a friend to everyone who came to him for assistance and many well-known men in the trade can trace their success to his help and advice.

Although 70 years of age at the time of his death, Mr. Vietor was in the prime of his business life. He was regarded as an authority on financial affairs and recognized as one of the ablest of our merchants engaged both in banking and merchandising, and because of his great business and financial acumen he was welcomed to the directorates of many institutions. He was a trustee of the American Surety Company of New York, the Franklin Trust Company, the German Savings Bank in the City of New York, the United States Trust Company, the Washington Trust Company, and the Munich Reinsurance Company; was president and director of the Poidebard Silk Company of Hoboken; and director of the Commercial Investment Company, the Credit Clearing House, the Equitable Life Assurance Society, the Kingsbridge Real Estate Company, and of the Jefferson, Mount Morris, Plaza, Yorkville and National Park banks of New York.

Mr. Vietor had traveled extensively and was a member of many social and other organizations, among which were the German, Lotos, Union League, Lawyers' and Ardsley clubs, the Deutscher Verein, the Merchants' Association of New York, the Merchants' Protective Association, the Hamilton Club of Brooklyn, and the Rumsen Country Club of New Jersey. He was also a trustee of the Fifth Avenue Presbyterian Church. On August 3, 1869, he was married at Brooklyn, N. Y., to Annie M., daughter of Thomas and Julie Achelis and their family consisted of four sons and one daughter: Thomas F. (b. 1871), who became a member of the firm in 1900 and now succeeds his father; Carl L. (b. 1879); Julie M. (b. 1877); George F., Jr. (b. 1882); and John A. (b. 1884).

With the death of Mr. Vietor the import and commission business lost one of its most prominent figures. Perhaps no merchant in the country enjoyed such popularity among those in every walk of life. By nature genial he was a favorite with everyone and his personal uprightness and business integrity commanded the respect and esteem of all. In token of the high place he held in the commercial world and in appreciation of his many splendid personal qualities, all the dry goods commission houses were closed during the hours when the funeral services were held. His home life was equally serene and happy and he radiated the same sunshine in his family circle that he did in business life.

Thomas Frederick Vietor

Thomas Frederick Vietor was born in the Borough (then the city) of Brooklyn, New York, October 22, 1871, one of the children of the late George Frederick and Annie M. (Achelis) Vietor. His father, the subject of the preceding sketch, was a successful mercant of New York, having been one of the original partners of the well-known firm of Frederick Vietor and Achelis.

As a young man he received his early educational training in the Polytechnic Institute of Brooklyn, then for a time attended the Berkeley School, and in 1888 entered Amherst College, remaining for a period of only two years. His parents believed in the efficacy of foreign travel as a supplementary educational course and as an excellent instrument for developing and broadening the character,

and after he left Amherst he was sent to Europe where he remained for the next three and a half years following various studies of value for his future career. He passed considerable time at textile mills and factories of which Frederick Vietor and Achelis were the American representatives, paying particular attention to the various processes and methods of manufacture, etc., and the first hand knowledge thus gained of the processes and economics of textile making in later years proved to be of incalculable value to him.

Upon his return from Europe in 1894 Mr. Vietor was given a small position at the very bottom of the ladder in his father's firm, in order that he might learn every detail of the business, but the fact that he was his father's son availed little so far as promotion was concerned—in fact, it tended in the other direction, as his father would not place himself in a position where anyone could say that his rise was due to favoritism. The latter, however, could not be kept in any one position for any length of time, but by hard, diligent, conscientious work and a display of rare executive ability forced a recognition of his merits from the officers of the company. He rapidly passed through every department of the business and within six years had won admission to full partnership in the firm. For several years he worked in the harness side by side with his father, receiving careful training under the personal supervision of the latter, who gradually shifted the burden of his business interests upon the younger shoulders. It was well that he measured up to the expectations of his father as the latter soon afterward began to fail in health, and finally passed quietly away in January, 1910. The son thereupon succeeded to a number of his father's interests of which he assumed the entire responsibility, and has continued to conduct the affairs of the companies of which he is the head with remarkable judgment and ability.

In addition to his connections with commercial houses Mr. Vietor is interested in several banking institutions. He is a director in the National Park Bank, the Plaza Bank, the Yorkville Bank, and the Mt. Morris Bank, and is also a trustee of the German Savings Bank.

He is a member of the Merchants' City Lunch, Union League, German, New York Athletic, Long Island Country and Rumsen Country clubs, and the German Hospital and Dispensary.

Charles Mattathias Jacobs

Charles Mattathias Jacobs was born at Hull, England, June 8, 1850. He was graduated under Cambridge University tutorship. At the age of 16 he was placed as a pupil with the firm of Charles and William Earle, engineers and shipbuilders of Hull, under whom he obtained a thorough mechanical training, and passed through their workshops and drafting offices. Finally he was appointed superintendent engineer in the construction of marine works. In 1874 he opened an office as consulting engineer at South Wales, practicing in marine and subaqueous works. In 1885 his sphere of work grew to such an extent that Mr. Jacobs removed to London. In 1889 he came to the United States by the invitation of the late Austin Corbin, then president of the Philadelphia and Reading railroad, to advise on various schemes in which that gentleman was interested, and more especially with reference to designing deep tunnels for rapid transit between Brooklyn, New York and Jersey City. Mr. Jacobs submitted plans for tunnels to run from the Battery, New York, as a centre, to a connection with the Long Island Railroad at Atlantic avenue, Brooklyn, and the Pennsylvania railroad at their station in Jersey City. The rapid transit problem in New York has been accomplished along similar lines by subways or shallow tunnels, and there have since been constructed tunnels from Atlantic avenue, in Brooklyn, to a connection with the subway system at the Battery in New York, and from the Pennsylvania railroad's station in Jersey City to a terminal at Church street, in New York, with passageway under Dey street, giving underground connection with the subway at its Fulton street and Broadway station.

In 1892, as chief engineer of the East River Gas Company, Mr. Jacobs designed and constructed a tunnel of 10 feet 8 inches diameter between Ravenswood, on Long Island, and 71st street, New York. There are laid through this tunnel two large gas mains with a three feet gauge railway track alongside. The tunnel was driven simultaneously from both sides of the East river; the headings met at midnight of July 11, 1894, their connection completing the pioneer tunnel under the East river. Mr. Jacobs was also retained by the same interests to build a second, and much larger, tunnel to carry the mails from the company's gas works at Astoria, Long Island, into New York City. He is the originator and patentee of the new form of engineering in tunneling known as the «subterranean tunnel bridge,» an entirely new form of tunnel construction, for which he received a master patent from the United States government and a gold medal award at the St. Louis exposition. This new tunnel construction was adopted by the Pennsylvania railroad for its tunnels under the Hudson river from Jersey City to New York, and Mr. Jacobs was chief engineer of the tunnel lines through which the enormous passenger traffic of the road is carried without change of cars to a terminal in the heart of the city of New York.

He designed for the New York and Jersey

Railroad Company twin tunnels from Hoboken to Forty-second street and Lexington avenue, New York, by way of Jersey City, and Christopher street and Sixth avenue, New York. Mr. Jacobs also designed and built for the Hudson and Manhattan Railroad Company two single track tubes to run from the Jersey City station of the Pennsylvania railroad to a terminal at Church street, New York, with passageway connected to the subway at its Fulton street and Broadway station. He is chief engineer of the Hudson Companies, a corporation which was formed to construct the tunnel lines indicated, of the New York and Jersey and Hudson and Manhattan railroads, and to build extensions to make connection with the principal steam railroad terminals on the New Jersey side of the North river, as well as with the suburban electric lines. He is also engaged in a large variety of other engineering works in England, India, and the United States and has achieved a reputation as the leading tunnel expert in the world. Mr. Jacobs is a member of the Institution of Civil Engineers' and the Institution of Mechanical Engineers, England; the American Society of Civil Engineers; the City of London and Royal Societies clubs of London; the Engineers' and Lawyers' clubs, New York City, and the Automobile Club of America.

Benjamin Franklin Tracy

Benjamin Franklin Tracy was born at Owego, Tioga County, N. Y., April 26, 1830, the son of Benjamin Tracy, a pioneer settler of the southern part of New York state. He received his education in the common school of his native town, and at the Owego Academy, early evincing a studious nature and a great love of books. His legal studies were pursued in the office of N. W. Davis, a local lawyer, and he was admitted to the bar in 1851. From arguing petty cases in the village court he rose to more and more important charges, meeting in debate the most distinguished lawyers of the locality. He also gained considerable political influence and affiliating himself with the Whig party, was elected district attorney of Tioga county in 1853, at the age of 23. His popularity is indicated by his large plurality despite the fact that the county was strongly Democratic. In 1856 he was re-elected, his opponent being Gilbert C. Walker, afterwards his close friend and law partner, and later governor of Virginia. A third nomination was refused by Mr. Tracy in 1859. The new issues, which resulted in the formation of the Republican party, found in him a ready advocate, and he became one of the principal organizers of that party in his state. Endorsed by both Republicans and War Democrats, he was elected to the legislature from Tioga county in 1861, gaining considerable reputation as a debater on the floor of the assembly and acting as chairman of important committees.

Benjamin F. Tracy

Early in 1862, as member of a committee appointed by Governor Morgan for the purpose of raising volunteer troops, he personally organized two regiments. As colonel of one of them, the 109th New York volunteers, he reported at Baltimore in August, 1862, and was on duty at Washington until the spring of 1864, when his regiment was attached to Hartrauft's 1st Brigade, 3d division of Burnside's 9th corps, Army of the Potomac. At the battle of the Wilderness he exhibited such gallantry as to earn for him the Congressional medal of honor, awarded June 21, 1895. Toward the close of the first day, however, he fell exhausted from over-exertion, but refusing to leave the field he led his forces through the fighting which ensued at Spottsylvania, at the end of which a complete breakdown forced him to relinquish his command. After recuperating in the North he became colonel of the 127th United States colored troops, September 10, 1864, and later in the same year was appointed commander of the military post at Elmira, N. Y. (the draft rendezvous for western New York), including a prison camp which held at one time as many as 10,000 prisoners. On March 13, 1865, Colonel Tracy was brevetted brigadier general "for gallant and meritorious services during the war," and exactly three months later, having tendered his resignation, was honorably discharged.

He then returned to the practice of law in the firm of Benedict, Burr and Benedict, of New York City, and in October, 1866, was appointed United States district attorney for the eastern district of New York. In this capacity he bent his energies to the enforcement of revenue payments by whiskey distillers and drew up a law regulating the collection of the tax on distilled spirits that raised the United States revenue from this source from $13,000,000 to $50,000,000 in one year. It was said that but for his efforts the internal revenue system would have failed. When his term of service ended in 1873, he resumed the practice of law in Brooklyn, N. Y., and among the notable cases in which he was engaged was the famous suit of Theodore Tilton against Rev. Henry Ward Beecher in 1874-5. After filling a va-

cancy on the bench of the New York state court of appeals during 1881-82, he returned to his practice, which soon became one of the largest in New York, with William C. DeWitt, and his son B. F. Tracy as partners. On March 5, 1889, he was again summoned to the public service, being tendered the portfolio of the secretary of the navy in the cabinet of President Harrison. A general rehabilitation and increase of the naval force was begun under him, nearly 40 vessels being built in the two years of his incumbency. The civil service reform movement being well under way at this time, the system was applied by him to the administration of the United States navy yards. In 1893 General Tracy again took up the practice of his profession in New York City, where he has since continued to reside. He has taken a constant interest in civic betterment and served as president of the commission which drafted a new charter for the greater city upon its consolidation. In 1897 he was the Republican candidate for mayor of New York, but was defeated. General Tracy holds one of the most distinguished positions at the bar, while his efforts for good government have given him a national reputation. He is a member of the Military Order of the Loyal Legion, the Grand Army of the Republic and the Union League and Metropolitan clubs of New York and the Hamilton Club of Brooklyn. He was married in 1851, to Delinda E. Catlin, of Owego, N. Y., who died in 1890.

Henry Marison Byllesby

Henry Marison Byllesby was born at Pittsburgh, Pa., February 16, 1859, one of the three children of DeWitt Clinton Byllesby, a clergyman of the Protestant Episcopal Church, and his wife Sarah Mathews Byllesby. After receiving a good public school education he was sent to Lehigh University, Bethlehem, Pa., entering the class of 1878, but he remained at this institution only three years, leaving at the end of the junior year. He then engaged in the electrical business and gradually worked his way up from one position to another until he had become vice-president and managing director of the Westinghouse Electric Company of Pittsburgh. He resigned from this position, however, to go to Chicago, where he organized the firm of H. M. Byllesby and Company, to manage and operate public utility franchises, Mr. Byllesby becoming president of the company. He is also president of the Northern Idaho and Montana Power Company, the Northern States Power Company, and the Standard Gas and Electric Company, and is an officer in the following corporations: the Muskogee Gas and Electric Company, the Oklahoma Gas and Electric Company, the San Diego Consolidated Gas and Electric Company, the Enid Electric and Gas Company, the Fort Smith Light and Traction Company, the Ottumwa Railway and Light Company, the Tacoma Gas Company and the Everett Gas Company. He is also a director of the Chicago, Milwaukee and Puget Sound Railroad.

Mr. Byllesby is also president of the Chicago Civic Federation, a member of the executive committee of National Civic Federation and a member of the following clubs: the Lawyers', the Metropolitan, and the Railroad clubs of New York, the Arlington Club of Portland, Ore., the Minnesota Club of St. Paul, the South Shore Country, the Union League, the Glen View, the Chicago, and the Midday clubs of Chicago. On June 15, 1882, he was married at Roselle, N. J., to Margaret Stearns Baldwin.

Melville Weston Fuller

Melville Weston Fuller was born at Augusta, Me., February 11, 1833, and died at his summer home, Main-Stay, at Sorrento, near Bar Harbor, Me., July 4, 1910. He was in the 78th year of his age and the 22d of his service as head of the Supreme bench. To him had fallen the honor of third rank for length of service as presiding justice in the highest tribunal of the American government. Chief Justice Marshall presided over the court for 34 years and Chief Justice Taney for 28 years.

Although Chief Justice Fuller had never filled any judicial position before he was called to the Chief Justiceship of the United States, he came of a family distinguished for its services on the bench, and he bore a reputation at the Chicago bar of trying his cases with a respect for the rights of his opponents that promised well for his impartiality as a judge. His maternal grandfather, Nathan Weston, was from 1834 to 1841 chief justice of the state of Maine, and his paternal grandfather, Henry Weld Fuller, was on the bench of Kennebec County, Me., while his father was a well-known lawyer.

Justice Fuller was educated at Bowdoin College, from which he was graduated in 1853. He took up the study of law under the direction of his uncle, George M. Weston, of Bangor,

C. A. M. Pellisby

Me., and also attended a course of lectures at Harvard Law School. In 1855 he went into partnership with another uncle, Benjamin A. G. Fuller, of Augusta. At the same time his thoughts turned to journalism, and he became associated as editor of 'The Age,' the leading Democratic newspaper of Maine.

He could have taken a leading part in local affairs, and in 1856 he was elected president of the common council of his native town, and was at the same time city solicitor. However, it did not seem to him that Maine gave him sufficient opportunities for advancement, and in a few months he determined to try his fortunes in the West. Chicago had just at this time gained its first railroad connection with the East, and he settled there. Mr. Fuller quickly won himself a position at the bar of the growing city. He was noted for the hard work he put into the preparation of his cases, the keen interest he took in the success of his clients, and the courtesy and fairness which he displayed toward his legal opponents. Within two years of his arrival in Chicago he appeared before the supreme court of Illinois in the case of Beach vs. Derby.

The first case in which he was retained before the United States Supreme Court was that of Dows vs. Chicago, in which an attempt was made to restrain by bill the collection of a tax upon shares of the capital stock of a bank. His first personal appearance before the court over which he was for so long to preside was in the case of the Traders' Bank vs. Campbell, which involved the question whether a judgment against a bankrnpt could constitute a fraudulent preference. It is interesting to note that Mr. Fuller was also one of the counsel to argue the case of Tappan vs. The Merchant's National Bank of Chicago, the first case heard by Chief Justice Waite, whom he was to succeed. Mr. Fuller's practice was a comprehensive and lucrative one, but he was considered a special authority on commercial and real estate law. In the famous Cheney case he surprised his colleagues by his familiarity with canonical law and the writings of Church Fathers. In this he successfully defended Bishop Charles Edward Cheney against the attempt of an eccleciastical council to deprive him of his rectory and parsonage on the ground of canonical disobedience.

He was not a prominent figure in State politics, although he was a member of the Illinois state convention in 1862 and sat for one term in the lower house of the legislature. He was a delegate to the national Democratic conventions of 1864, 1876, and 1880, and in 1876 made the speech nominating Thomas A. Hendricks for President. He was a Democrat by conviction, and thus expressed his opinion of centralization of government in a eulogy of Stephen A. Douglas:

«These [Douglas's] doctrines were predicated upon the capacity of a man for self-rule and the attainment of success in that direction on a continental scale required the independence of local self-government as contradistinguished from that centralization of power which contains within itself the elements of disintegration.»

In 1888 Chief Justice Waite of the Supreme Court died, and it fell to President Grover Cleveland to select his successor. It is said that he was in favor of Edward J. Phelps, at that time ambassador to Great Britain, till a protest from the Irish Democrats forced him to change his views. Meanwhile Marshall Field, the Chicago merchant, was urging the claims of Mr. Fuller. The President received a flood of letters from all parts of the country, and decided to send the Chicago lawyer's name to the Senate. There it was submitted to the judiciary committee on April 30. No action was taken on it till July 20, when it was reported to the Senate «without recommendation.» For three hours the Senate debated the nomination in executive session. Doubts were cast on Mr. Fuller's loyalty to the Union and his ability as a lawyer. The Republicans brought up the Dred Scott decision of the Democratic Chief Justice Taney and declared that it was the final cause of the Civil War. Party feeling ran high, but in the end nine Republicans voted with the Democrats, and Mr. Fuller was confirmed by a vote of 41 to 20.

Considering the alarm felt at the appointment of Chief Justice Fuller, it is curious that during his term of office the powers of the Federal government were materially extended through the decision that there exists an implied authority on the part of the executive to protect Federal judges whenever there is reason to believe that they are exposed to danger in the exercise of their duties. This was the result of the case arising out of the shooting of ex-Judge Terry by a United States marshal, who believed that his act was necessary to protect the life of Mr. Justice Field. The Supreme Court held that the marshal's action was justifiable, as it was the duty of the United States government to protect its judicial officials, but Chief Justice Fuller concurred in the dissenting opinion of Mr. Justice Lamar on this point.

Chief Justice Fuller rendered during his 22 years on the bench a number of opinions of the highest importance. He declared the income tax law unconstitutional. He decided in the Danbury hat case that labor unions are amenable to the Sherman anti-trust law. In the case of the Western Union Telegraph Company vs. The Commonwealth of Pennsylvania he denied the right of the state to tax any telegraph messages but interstate ones. He established that the claims of a widow and her children to the insurance on the life of the husband and father are distinguishable from other claims against the estate on the ground that it is public policy that a man should provide for his wife and children. In Inman vs. The South Carolina Railway Company he denied the railroad the right to exempt itself from liability for its negligence in the shipment of goods. He wrote the opinion in Moore vs. Crawford, in which married women were made to bear liabilities such as those arising from the fraudulent sale of land, as well as to enjoy legal rights, and in Leisy vs. Hardia, in which the state was denied rights over original packages of liquors in inter-state commerce. In addition to his official duties he acted in 1899 as a member of the Arbitration Commission assembled at Paris to settle the Anglo-Venezuelan boundary question.

On the bench Chief Justice Fuller was notable for dignity. He was a small man, but was remarkable for his splendid head of white hair and his heavy mustache. He was uniformly

courteous to the bar, and was notable for the care with which he followed the most tedious argument. His voice was musical and low and in the few interruptions which the court made in the hearings of a case was heard to great advantage. He was a man of fine literary attainments, and was a specially good classical scholar. It was said that in his earlier days on the bench he gave up some of his spare time to poetry, traces of which were allowed at times to enter even into his judicial opinions. He was a finished speaker, and his address on December 11, 1889, before both houses of Congress on the occasion of the centenary of the first inauguration of Washington was held to be a masterpiece. In private life he was democratic in his habits, and he lived simply at his house in F Street, Washington. However, he had a great opinion of the dignity of his office as the head of that co-ordinate branch of the Federal government, which is mentioned second in the Constitution. He therefore claimed when he first came to Washington precedence at all official functions immediately after the President and Vice-President. This raised serious questions with the representatives of foreign powers, and consequently he avoided whenever possible appearance at any occasion at which a diplomat was expected.

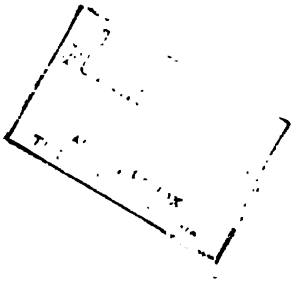
Chief Justice Fuller married twice, first in 1858, Miss Calista O. Reynolds, and again in 1866, Miss Mary E. Coolbaugh. He had six daughters.

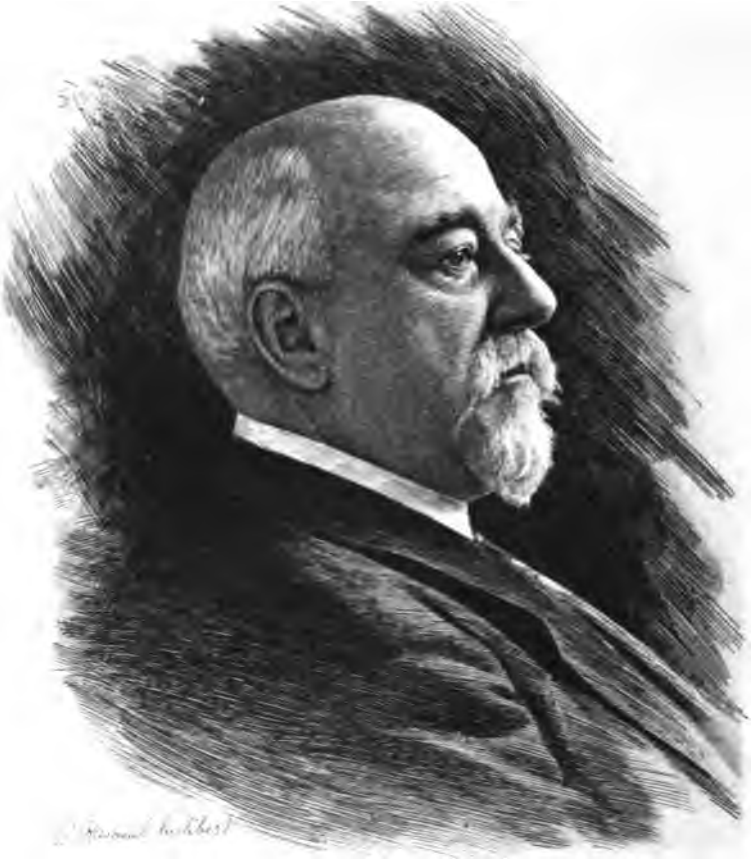
Robert Curtis Ogden

Robert Curtis Ogden was born at Philadelphia, Pa., June 20, 1836, the son of Jonathan and Abigail (Murphey) Ogden. His father (1809-93) was a leading merchant of New York city; his mother was a daughter of Robert and Abigail (Ashburner) Murphey of Philadelphia. He is a direct descendant of Richard Ogden of Chester, England, who settled at Fairfield, Conn., in 1630. Some of his descendants removed to southern New Jersey, where the work begun in Connecticut was continued by John Ogden, Edo Ogden, Curtis Ogden and the latter's wife, Ruth Swinney. Robert C. Ogden was educated in the schools of his native city and began his business life as a boy in a hardware store, where his advance was so rapid that from employee he became employer at an early day. The Civil War called him from business to military life, and he served throughout the Gettysburg campaign as a non-commissioned officer of the 23d New York regiment. Soon after the war he became a member of the firm of Devlin and Company, now non-existent, but one of the best-known firms of New York in the 70's. In 1879 he formed a business connection with John Wanamaker of Philadelphia, and until 1907 continued in the partnership as head of the mammoth Wanamaker store in New York, founded by that famous merchant, Alexander T. Stewart.

Shunning prominence, but never flinching from duty, Mr. Ogden is recognized as one of the most capable, forceful men of his day. In the movement which has for its object the advancement of rural school education in the South, to lead which he was called by Southern men, he was the vital force in the performance of a task of great difficulty, especially in the reconciliation of the various elements whose united action was absolutely essential to the attainment of the purpose it was sought to accomplish. He brought to the task the same directness of purpose and executive ability which won him business success, with the result that the conference for education in the South and the southern education board, of both of which he is president, inaugurated a crusade in behalf of the education of all the the people. At the time of the Johnstown flood in 1889, he was one of the leading members of the flood relief commission, and has at various periods been identified with other achievements for the public benefit.

He is the author of a number of booklets: 'Samuel Chapman Armstrong, Founder's Day Address' (1894); 'Pew Rents and the New Testament; Can They be Reconciled?' (1892); and 'Sunday School Teaching' (1894). He is a member of the Union League Club of Philadelphia; the Century Association, the Union League, the National Arts, and the City clubs of New York; and the Hamilton Club of Brooklyn. He is president of the board of trustees of Hampton Institute, Hampton, Va.; president of the conference for education in the South; president of the southern education board; director of Union Theological Seminary; trustee of Tuskegee Institute, Tuskegee, Ala.; trustee of the Teachers College of New York, and member of the general education board. He was married in 1860 to Ellen E., daughter of Walter O. Lewis of Brooklyn, N. Y., who died in 1909, leaving two daughters: Julia Treadwell (Mrs. George Waldo Crary), and Helen Ogden (Mrs. Alexander Purves).





E. R. Thomas

Edwin Ross Thomas

Edwin Ross Thomas was born at Webster, Westmoreland County, Pa., in 1850, one of the four sons of Joseph Batty and Elizabeth (Van Hook) Thomas. His father was one of the pioneer coal merchants of Pittsburg, floating his coal to Southern ports before the days of steam towing. Later he was a coal operator in Kentucky and at Evansville, Ind.

The son was educated in the high schools at Evansville, Ind., and later supplemented this by a course in Duff's College, Pittsburg, Pa. Immediately after leaving college he engaged in business life. From 1863 to 1879 he was in the marine transportation business on the Ohio and Mississippi rivers; from 1879 to 1882 he was a coal mine operator in Evansville, Ind.; and from 1892 to 1895 he conducted a railway and steamboat agency and was also a real estate operator in Memphis, Tenn., where he contributed largely to the growth and development of the city. He was also a director of the Mechanics' Savings Bank and of the East End Railway. He then embarked in the manufacture of bicycles, from 1895 to 1899, being the managing partner in the firm of H. A. Lozier and Company, manufacturers of the Cleveland bicycle, at Toronto, Canada. In 1899 he became vice-president of the Canada Cycle and Motor Company, of Toronto, but resigned to engage in the manufacture of automobiles. The next year he founded the E. R. Thomas Motor Company, of Buffalo, manufacturers of the «Thomas Flyer» automobiles, one of the oldest and largest automobile manufacturing companies in the United States, and of which Mr. Thomas was the sole owner. In 1906 he founded the Thomas Detroit Company, now the Chalmers Motor Company, of Detroit, in which he is a large stockholder and director.

Though of well-to-do parentage, Mr. Thomas has been engaged in some sort of business since he was nine years of age—even when going to school—and it is a singular fact that, with the exception of three years as a coal operator, almost his entire career has been connected with some branch of the transportation business—first steamboating, then railroading, next the manufacture of bicycles, and at the present time the building of automobiles. In addition he was president and proprietor of the Taxi-Motor Cab Company, of Boston, and president and proprietor of the Federal Taxicab Company, of Washington. At the same time, however, transportation did not monopolize all the great business ability possessed by Mr. Thomas, for he was also connected with several other corporations of a distinctly different character, among which were the E. R. Thomas Reallty Company, of which he was president, the Central National Bank of Buffalo, of which he was a director, and the Iron Elevator and Transfer Company of Buffalo, of which he was a director. Mr. Thomas has now retired from active business affairs.

Mr. Thomas has always taken great delight in traveling and has indulged in this pleasure as much as his large business interests would permit. He has traversed almost every section of the United States, and has also covered large portions of Alaska, Cuba, Egypt, Greece, Italy, France, Germany, and England. His favorite recreations are yachting and automobiling. He is also extremely fond of social life and enjoys the pleasures and companionships to be found in the various clubs of which he is a member, among them being the Ellicott Club, of which he was at one time president, the Buffalo Club, the Country Club, the Park Club, the Royal Canadian Yacht Club (Toronto), the Buffalo Motor Boat Club, the Niagara Golf Club, and the Automobile Club. He was married at Aurora, Ind, in 1879, to Flora Lozier, daughter of Abram Lozier, and to them three children have been born: Edwin Lozier (b. 1880); Elizabeth Van Hook (b. 1887); and Jack Grammer (b. 1893). Of the children two have been married: Edwin L. in 1906, and Elizabeth in 1909.

Edward Thomas Bedford

Edward Thomas Bedford was born at Brooklyn, N. Y., February 19, 1849, the son of Frederick Thomas and Mary Ann Elizabeth (Pace) Bedford. His parents were born in England, and came to this country in 1848, settling in Brooklyn. His father enjoyed an enviable reputation as an artist, designer and wood carver, won after many years of successful practice in his profession, and one of his most noteworthy productions was the carved frame for the life-size portrait of the Prince of Wales (the late King Edward VII.) which the City of New York presented to Queen Victoria during the visit of the Prince to America.

The young man's education was obtained in the public schools of Brooklyn after which he attended and was graduated from Maplegrove Academy, Westport, Conn. As in the case of a large number of Brooklyn men Mr. Bedford has had a long, honorable and successful business career which has been intimately associated with the vast petroleum industry of this country and particularly with the management of the Standard Oil Company. His first experience in business life was as a salesman for

the firm of Charles Pratt & Company, the oil dealers, but later he became connected with Robert Chesebrough in introducing and establishing the product vaseline which soon had an extensive sale. He then entered the employ of the firm of Boyd and Thompson of which he subsequently became a junior partner, the name being changed to R. J. Thompson & Company. Still later the firm underwent another reorganization, becoming Thompson & Bedford, consisting of R. J. Thompson, Mr. Bedford, Charles Pratt and Henry H. Rogers; and in 1880 it was incorporated as the Thompson & Bedford Company, Limited, the company then becoming the eastern selling agents of lubricating oils for the Standard Oil Company, which owned a majority interest of their stock. Soon afterward Thompson and Bedford sold their holdings to the Standard Oil Company, Mr. Thompson retired and Mr. Bedford was made president of the company, but in 1893 when the Standard Oil Company was dissolved under the anti-trust law, the business became a department of the Standard Oil Company under the name of Thompson & Bedford department.

In 1903 Mr. Bedford was elected a director of the Standard Oil Company of New Jersey, and became a member of its executive committee, but on January 1, 1909, he retired from the active management of the affairs of that company, although still remaining in it as a director, in order to devote more of his time to promoting the interests of the Corn Products Refining Company, an $80,000,000 corporation, of which he was president. This latter company was the successor of the Corn Products Company, which had not been as successful as was hoped and expected. In 1907 the company was reorganized as the Corn Products Refining Company, with Mr. Bedford as its president and immediately its affairs took a turn toward greater prosperity. The last report of the original company showed only $375,000 net earnings, but in a recent report issued by Mr. Bedford in connection with the issuing of $10,000,000 worth of bonds to promote the business, it was stated that during the previous three years the average net earnings had been over $3,250,000 per year. This was due to the careful and conservative character of the management of Mr. Bedford who was the chief factor in bringing about this remarkable success.

Beside these Mr. Bedford is also actively engaged in many other business enterprises. He was at one time connected with Charles W. Morse in the ice business and during the time he was associated with the management of the company the selling price of ice was reduced to 20 pounds for 5 cents at which price the company prospered and paid dividends, but under Morse's more active management the price was raised upon the claim of a short crop. Mr. Bedford thereupon retired and later the company got into litigation and trouble which undermined the Morse influence and Bedford then joined in a reorganization of the company, at which time its capital was reduced from $60,000,000 to $20,000,000. The company once more began a prosperous career but the Morse influence was brought to be advance prices and Mr. Bedford again r from the board upon which the company to grief. Such also was the case of the of North America which closed its doors Mr. Bedford had retired and the Morse ence became predominant. Mr. Bedfor now president of the Corn Products Re Company, the New York Glucose Company Bedford Petroleum Company, of France Colonial Oil Company, of New Jersey, an Self-Winding Clock Company; vice-preside the Matheson Lead Company; a director of Standard Oil Company of New Jersey, Bush Terminal Company, the Thomp Starrett Company; and a trustee and dire of the Title Guarantee and Trust Company, Southport Trust Company of Connecticut, the Long Island Safe Deposit Company, Brooklyn.

Mr. Bedford is an advocate of out-door and the gentlemanly sports, and is a member the Riding and Driving Club of New York, Parkway Driving Club of Brooklyn, the Bri port Yacht Club, the Brooklawn Club of Bri port, the Black Rock Harbor Club, a Hokanum Golf Club. He is a lover and breed of fine horses and is recognized as one of th best and most expert road drivers in the cou try. At his breeding and stock farm—Wyni mere—at Greens Farms, Fairfield County Conn., he has bred a number of well-know colts, some of which are record holders, includ ing the celebrated mare, Hamburg Belle, Bemay York Boy, and others. Hamburg Belle wi a record of 2.01¼, won the Charter Oak Stake at Hartford in the fastest time in which they have ever been won. On October 25, 1902, a the Parkway Club, Mr. Bedford established world's record for a team driven to road wagon when he himself drove Bemay and York Boy over a half-mile track in 2.12¼. He also estab lished the world's race record for a single horse to wagon with York Boy, 2.08¾. Beside his racers Mr. Bedford has a valuable show stable containing many prize winners. With his daughter, Miss Emily Bedford, he has exhibited and won many championships and blue ribbons with the great chestnut mare Hildred and her team mate Plymouth Champion, and with the team of ladies' horses, Donner and Blitzen. Miss Bedford has been equally successful in the saddle classes and has won numerous champion ships and blue ribbons with her saddle horses Redberry, Miss Ann, Patsy Palmer, and others

In December, 1871, Mr. Bedford was mar ried at Bronxville, N. Y., to Mary Ann Dingee daughter of Peter M. Dingee, of the firm of P. M. Dingee & Sons. To them have been bor five children—three daughters: Mary E., wife of Johannes Schiott, of Bridgeport, Conn. Emily H., and Grace M.; and two sons: Charle E., in charge of the foreign and domestic marine oil department of the Standard Oil Company, and Frederick T., treasurer of the Corn Product Refining Company.

THE
PUB

John La Farge

John La Farge was born at New York City, March 31, 1835, and died at Providence, R. I., November 14, 1910. His father was a Frenchman who took part in General Leclerc's expedition to Santo Domingo in 1806 and escaped from imprisonment there to establish himself in America, where he married the daughter of a planter from Santo Domingo, a miniature painter of some skill, and the artist's first instructor.

Enabled by the comfortable circumstances of the family to consult his own wishes at leisure in the choice of a profession, Mr. La Farge, after a classical and legal education in this country, went abroad to travel and to study art chiefly as an accomplishment. In Couture's atelier he received advice and criticism, but spent most of his time in the Louvre studying and copying the drawings of the old masters. Many sketches of that period and the years immediately following are still in existence and bear testimony to the extreme fidelity to his models practiced by the young art student, who copied from the first with extraordinary accuracy and patience.

After his return to America he entered a lawyer's office and for some time struggled, to use his own phrase, against his destiny. Finally, however, he gave himself up to art, and began to study the technique of painting under William M. Hunt, who had a studio in Newport, R. I. In 1860 he married Margaret Perry, and for the next few years devoted himself with great intensity of purpose to mastering the science of his art, working chiefly in landscape and producing faithful and beautiful transcripts of Newport scenes. The canvas called «Bishop Berkeley's Rock,» which was on exhibition in New York a few years ago, and which dates back to 1868, shows the dignity and distinction not so much of his method as of his vision. He saw his rocks and fields in a large way and in their relation to the rest of the good brown earth. In those days he was decidedly a realist in the sense of clinging close to the visible facts of nature. Atmospheric facts were perhaps of less interest to him than others, and throughout his career as a painter he used color in a way to emphasize the weight and mass of material substances rather than the movement of air. But he never failed to render the sentiment of reality. We are more conscious of his faithfulness to the thing seen than of his imagination in his early pictures, save in the drawings made for the old 'Riverside Magazine' in which he indulged to the full his romantic love of the unearthly and visionary.

It was not until the early seventies that La Farge became interested in the practical problems of glassmaking, but from that time on his mind worked on the possibilities of that material as a medium of art. It has long been known, how he made his experiment first in his sick-room, when recovering from a serious illness he amused himself by placing together bits of opalescent and transparent glass, then later, in his studio, with a single workman to aid him, until finally he was in full possession of his wonderful craft and had introduced to the world the new material known as «American» glass. Although in his later years he continued to paint, and quite recently did a number of important mural decorations for public buildings in different parts of the country his glass is the most imposing monument to his fame. The last window produced by him is the one now in the Worcester Museum, the «Peacock Window,» in which a peacock against a background of peonies gives opportunity for the expression of that marvelous sense of color which in his glass alone the artist revealed in all its richness. The «Peacock Window» is a kind of cloisonne, a technical masterpiece, made by joining glass with thin filaments of metal fused to the glass and plate on both sides, with different surfaces adhering. This method was seldom used by the artist, as it involved great expense and continuous personal supervision. Trinity Church, Boston, contains a number of his windows, which, together with the paintings in the church, represent practically his first work of importance in church decoration. In Memorial Hall, Cambridge, Mass., is what is called the «Battle Window,» made in 1878, in which he used every variety of glass possible, and even precious stones.

In 1886 Mr. La Farge spent a summer in Japan with his friend Henry Adams, and in the «Letters» that later appeared in the 'Century Magazine' he established himself in the minds of the public as a writer of peculiar subtlety and sympathy with alien races. Later, in the South Sea Islands, he showed with still more impressiveness the flexibility of his mind and its capacity to accept with hospitality traditions and ideas for which he had been able to make no preparation. The sensitive courtesy of understanding which he took with him to places peopled by primitive beings, made it possible for him to find their point of view and judge them with an intellectual humility rare in any but the most inspired philosophers.

Although an innovator, and subjected for that reason to the trials of those who teach a new thing, Mr. La Farge received during his lifetime a considerable measure of honors and appreciation. He was president of the Society of American Artists and of the Society of Mural Painters; in 1889 he was made Chevalier, and in 1901 Officer of the Legion of Honor, and in Germany and England, as well as in France, he gained the applause of high authorities. In losing him America lost not only a great artist but a great personality.

The illness which brought the end began in New York in the early spring. At that time Mr. La Farge underwent a slight operation from which he failed to recuperate. For more than a year preceding his collapse the painter had been confined to his house for weeks at a time, and it was said he was suffering from no special malady but rather from the infirmi-

ties of age. Mr. La Farge had been working for years upon the manuscript of a book which was to tell the story of his long career as an artist. It was said that he had, just before his breakdown, overtaxed his strength by his labors upon this volume.

Mrs. La Farge, who was Miss Margaret Perry of Newport, is a granddaughter of Commodore Perry. Seven of the painter's children survive him, a single daughter, Miss Margaret La Farge; two married daughters, Mrs. William R. Claxton, and Mrs. E. H. Childs of New York, and four sons, C. Grant La Farge, an architect of New York; B. La Farge, Oliver H. P. La Farge, a Seattle banker, and the Rev. John La Farge, of Woodstock, Md.

Elbert Henry Gary

Elbert Henry Gary was born at Wheaton (a suburb of Chicago), Du Page County, Ill., October 8, 1846, the son of Erastus and Susan A. (Vallette) Gary, grandson of William and Mary (Perrin) Gary, and a descendant of Arthur Gary, who emigrated to this country from England about 1640. Mr. Gary's parents were among the pioneers of Du Page County, Illinois, and his boyhood life upon his father's farm developed that superb physique which has always been noted in him, and that enabled him to accomplish in later life Herculean tasks with an ease and facility that surprised those who were unacquainted with him in his earlier years. Of a studious nature, he was ambitious to acquire a thorough education, and after attending the public schools entered Wheaton College. Having decided to follow the legal profession, he entered the law office of Vallette and Cody, of Naperville, Ill., one of the best known law firms in that part of the country. He then took a course in the law department of the University of Chicago, where he was graduated LL.B. in June, 1867.

Before entering upon his practice he took a position as chief clerk in the superior clerk's office in Chicago, and there by his diligence, industry and intelligence acquired a knowledge of forms and practice that was of infinite benefit to him when he began his legal career. This occurred in the year 1871. Two years later he formed a partnership with his brother, Noah E. Gary, and before long he became recognized as one of the most capable trial lawyers in Chicago. In 1879 Judge Hiram H. Cody retired from the circuit bench and joined Mr. Gary's firm, which then became known as Gary, Cody and Gary. He devoted himself particularly to a study of the law affecting corporations. He became general counsel of the Northwestern Elevated Railroad Company, the western department of the Baltimore and Ohio railroad, and a number of other large corporations, including the American Steel and Wire Company, and the Illinois Steel Company, he being also a director in the last two. In 1882 he was elected judge of Du Page County, and was reelected in 1886, and during the two terms he served on the bench he was frequently called upon to assist the county judge of Cook county (in which Chicago is situated). He presided with dignity, coupled with a courtesy that enabled every lawyer to feel that he was assured of fair treatment and proper consideration. His experience on the bench and the fairness and ability with which he discharged his duties widened his acquaintance with the bar and the business men of Chicago, and brought him many new clients and enlarged his reputation. For many years before he left Chicago to enter that wider field of usefulness in New York city, it is said that he probably had a larger yearly retainer that any other lawyer in Chicago. His grasp of business conditions and business propositions was remarkable, and those in charge of the great commercial and industrial interests of Chicago and the West soon learned that his advice was invaluable to them, and it was this business ability that ultimately led to his abandoning the practice of his profession and engaging in the great business enterprises in which he achieved such remarkable success. In 1873 he had organized the Gary-Wheaton Bank in his native city, of which he served as president until 1898. This was a successful business venture from the start. He had also been closely associated with those who built up the iron and steel interests of Illinois. He took a leading part in the organization of the Consolidated Steel and Wire Company in 1890, and eight years later of the American Steel and Wire Company, which included the manufacturers of 75 per cent. of the entire steel rod and wire products of the United States. His talents as an organizer are further demonstrated by his services in the organization of the Federal Steel Company with a capital stock of $200,000,000, in which he took a leading part. Mr. Gary's theory was that by owning mines, manufactories and means of transportation, the work of such a company could be more effectually and economically done than by leaving these several departments in the hands of separate companies. He retired from the practice of law and removed to New York city to become president of this new organization. The Federal Steel Company is one of the constituent companies of the United States Steel Corporation, with the organization of which Mr. Gary was prominently identified. He was made chairman of the board of directors as well as of the finance committee of this corporation.

In honor of Mr. Gary, and to commemorate the important part he took in the formation of this enterprise, the new city of Gary in Lake county, Ind., was named after him. The city of Gary was laid out in 1906 on the shores of Lake Michigan as the most suitable location for a mammoth plant consisting of sixteen blast furnaces, ninety-eight open hearth furnaces, coke works, and finishing mills for making all kinds of structural steel, rails, plates, bar iron,

axles, etc., and so planned as to be capable of indefinite expansion. The plan of construction, which exceeded in magnitude anything of the kind ever undertaken before, provided for the housing of many thousands of workmen, and the land on the south side of the Calumet river was reserved for that purpose. The distinction of this "magic city," as it has been called, consists both in the rapidity of its growth and its perfection in every detail. What was in June, 1906, a barren waste had become, approximately two and a half years later, an industrial centre in full activity, joining with a plant completely equipped for an immense output, a residential district providing for all the necessities, comforts, educational and spiritual advancement, and amusement of its inhabitants. The actual manufacturing was begun in December, 1908, when the following features were completed: An artificial water-way for the harboring of the ore vessels, extending a mile inland from Lake Michigan; beside it the unloading machinery and the blast furnaces for turning the ore into iron, and behind this the blast and open-hearth furnaces for turning the iron into steel, and mills where the steel is rolled into commercial shapes. The population of the town at that time already numbered over 15,000, housed in comfortable dwellings largely owned by themselves; two hotels, two banks, a newspaper and many stores were in operation, and plans laid for schools, churches of various denominations, and a theatre. No other concern being prepared to undertake a work of such magnitude, the construction was entrusted to two subsidiary concerns formed by the United States Steel Corporation, while the actual work was in the hands of various sub-contractors. In order to avoid unnecessary labor all the underground work, such as the laying of sewers and conduits, was done first, so that the entire city literally grew almost simultaneously from its foundations up. The carrying out of the plan in the face of many difficulties in such a way as to provide for the future needs of a community which was predicted to reach the number of 50,000 within a very short time, attests to the ingenuity and foresight of the founders and the eminent engineers engaged in the work.

Mr. Gary is also a director in a large number of other corporations. He was president of the town of Wheaton, Ill., during 1872-73 and upon its incorporation as a city in 1892 was elected its first mayor, serving for two terms, and for several years he served as president of its board of education. He was president of the Chicago Bar Association during 1893-94, and is a member of the Metropolitan Club, the New York Yacht Club and the Lawyers' Club of New York, the Union League and the Chicago Club of Chicago, the Automobile clubs of Great Britain and Ireland, Germany, France and America, and also a member of the New York Chamber of Commerce. The degree of LL.D. was conferred upon him by McKendree College. Mr. Gary was married June 23, 1869, to Julia E., daughter of Amos C. Graves, of Aurora, Ill., and has two daughters: Gertrude, wife of Dr. Harry W. Sutcliffe, and Bertha, wife of Robert W. Campbell. Mrs. Gary died in June, 1902, and he was married again on December 2, 1905, to Mrs. Emma T. Scott, of New York City.

Russell Alexander Alger, Jr.

Russell Alexander Alger, Jr., was born at Detroit, Mich., February 27, 1873, son of General Russell A. and Annette (Henry) Alger, of English and Scotch ancestry. The Algers were pioneers in this country from early colonial times. John Alger, the great-great-grandfather of our subject was a soldier in the Revolutionary War, and Russell, his grandfather, was one of the early settlers on the Western Reserve, Ohio, in 1820. Russell A. Alger, the elder (1836-1907), born in a rude log cabin in that community of sturdy pioneers, rose to the highest rank of eminent men of his day, with distinguished honors bestowed upon him by state and nation. At first a lawyer in Akron, O., he enlisted in the Union army and served with great distinction throughout the Civil War. After many acts of bravery and participation in over 60 engagements he was brevetted major-general of volunteers. During a very successful business career in Michigan, where he settled after the close of the conflict, he accumulated a considerable fortune in lumbering and other enterprises. He was governor of his state during 1885-7, and was the choice of the Republicans of his state for president in three national conventions. After serving as secretary of war in President McKinley's cabinet, he represented Michigan in the United States Senate from 1902 till his death.

Russell A. Alger, Jr.

The son received his elementary education privately, and then attended Phillips Andover Academy for some time. He gained his first experience in the lumber business and soon demonstrated his ability to achieve an independent success. Becoming interested in the manufacture of paper in 1896 he became general manager of the Laurentide Paper Company, of Grandemere, Ontario, Canada. This position he held successfully for five years, at the end of which period he returned to Detroit and joined his father's firm of Alger, Smith and Company, one of the largest lumber concerns in the country. He was elected treas-

urer of the company, and at once plunged into his new duties with energy and zeal, showing a remarkable grasp of details, and proving himself equal to the task of directing the industrial policy of a great establishment. By the time of his father's death, January 24, 1907, he was virtually in control, and accordingly became president of the company.

Mr. Alger is also interested in many industrial enterprises, being president and director of the Anderson Forge and Machine Company; vice-president and director of the Packard Motor Car Company and of the Manistique Lumber Company; treasurer and director of the Duluth and Northern Minnesota Railroad Company, and a director of the Michigan Bell Telephone Company, the Alger-Sullivan Lumber Company, of Detroit, and the Wright Company, of Dayton, Ohio. He was one of the organizers of the last named company for the purpose of manufacturing on a large scale and placing on the market the æroplane invented by the Wright brothers. This indicates at once his interest in æronautics and the progressive spirit of this capitalist of the younger school.

Mr. Alger is prominent in the social circles of Detroit and New York, being a member of the Yondetoga Club of the former city, the Detroit Country Club, Detroit Boat Club and Detroit Yacht Club, and of the New York Yacht Club and the Aero Club of New York, as well as the Automobile Club of America, and the Loyal Legion. He was married, January 23, 1896, to Marion, daughter of Demming Jarves, by whom he had three children.

Timothy Eaton

Timothy Eaton was born in 1834 in the townland of Clogher, about two miles from Ballymena, County Antrim, Ireland, and died at Toronto, Canada, January 31, 1907. He was the youngest of the nine children of John Eaton and Margaret Craig, and was descended from men of the plantation of Ulster in King James' time who settled in the north of Ireland. His father was a successful farmer, occupying and tilling the land that had been in the family for several generations. His mother was also descended from a Scotch family which went to Ireland many years after the Eaton family had settled there, and she was distinguished by all the intellectual, moral and religious traits so characteristic of her race.

Nearly coincident with the birth of Timothy occurred his father's death, at the early age of 50 years, but as the elder children were nearing manhood, the mother was able to support the younger children, to maintain the home in comparative comfort, and to give them all as complete an education as the schools of the vicinity would allow, for she believed that the children should be prepared for pursuits more conducive to prosperity than the cultivation of the soil. The system of national schools was already in operation in Ireland and as the town of Ballymena was near, Timothy enjoyed the best advantages to be obtained in these schools until he was 16 years of age. The famine of 1846-7, however, which brought so much distress to the people of Ireland, did not pass the Eaton family, but in spite of these hardships, his mother, instead of keeping him at home to help on the farm, wisely apprenticed him to the most progressive draper in the vicinity. His character was now to be tried by every test which necessarily comes to one in business life and that he went through a long and exceedingly busy life career with unsullied honor and without a question as to personal integrity and uprightness is a glowing testimonial to the careful manner in which his character had been moulded and trained by the mother.

Possessed of a rugged health and a keen, observant, active mind stored with wholesome and useful knowledge, being accustomed to exercise only the best of habits, and having been thoroughly disciplined in the advantages of industry, thrift, promptitude and fidelity to every trust, the youth left the parental home in 1850 or 1851 to become an apprentice. He was bound out for five years to the then principal draper in Portglenone, a small town 12 miles distant from his home, but though compelled to work at tasks of every kind from early morning until late at night the young man did not lose courage nor consider his work oppressive or distasteful. He was working with a purpose in view and his ambitious nature did not permit him to grumble or shirk his duties. His desire was to learn sound business methods and his apprenticeship was a means of gathering the materials and forming the ideals that in later years he would use to advantage. He was, therefore, a tireless worker in his new occupation and before long had won the entire confidence of his employer, so much so that he was sent out to purchase stock for the shop. His reward for these faithful services was not great, however, as he received according to the custom of the time only £100 and a suit of clothes, but in addition his employer presented him with a silver watch as a token of regard.

After his apprenticeship had been served the boy went to Canada, whither two of his brothers had gone several years previously. In 1857 the lad set forth upon the long journey and shortly after his arrival found employment in a country store at Glen Williams. He soon decided to engage in business for himself, however, and in the same year opened a store at Kirkton, a village near St. Marys, Ontario. In order to find a field for greater expansion he moved in 1859 to the larger town of St. Marys where he joined his brother in what was then considered a large general store. In dealing with farmers the practice was to barter

ry goods and groceries for farm produce, and f the produce were not ready for market, the tore would give credit until harvest time. Al- vays an advocate of cash dealings, the waste- ulness of the credit system was borne in upon im in St. Marys, and after nine years, having ccumulated enough wealth to enable him to tart alone in a substantial way in a place nore favorable to the establishment of a cash usiness, he left St. Marys and came to Toronto vhich with its large population seemed to pre- ent greater possibility for the success of the 'cash and one price» idea. Here his scheme of buying and selling for cash began to reap ts first rewards and after a short period of patient toil the business became firmly estab- ished and subsequently grew to such a marvel- ous extent that it is now the largest store in Canada, if not in the British dominions. The nethods employed by the company for saving noney for its customers were soon well known throughout Canada and the opportunity to buy economically was quickly grasped by all. As the business expanded Mr. Eaton dispensed with the middleman and his profits and Euro- pean offices for buying direct from the pro- ducer were established at London and Paris. This meant an enormous saving, but still Mr. Eaton was not satisfied, and in order to effect still further reductions erected manufacturing plants of his own, making his price according to the cost of the goods and not according to what he thought the customer could afford or ought to pay.

Some idea of the magnitude of the business may be gleaned from the statistics regarding the stores operated by the company. The Toronto store and factories occupy 33 acres of floor space and employ 10,500 people; there are over 325 telephones constantly in use; 31 miles of pneumatic tubes transmit the cash from the counters to the 62 cashiers required to handle the receipts; there are 44 elevators besides a moving stairway; 295 horses and 142 wagons are required to deliver merchandise; the lunch and grill rooms have a capacity of serving 6,500 people daily. The lunch room staff is composed of 290 chefs, cooks, bakers and waitresses; and the millinery workrooms employ a force of 100 to 230 according to sea- son. The engine room has 9 boilers with an aggregate of 4,900 horse-power and 12 modern engines capable of generating enough electricity to supply 64,000 incandescent lamps, these en- gines producing the power for running the fac- tory machinery, for lighting the store and fac- tories, for the water pumping necessary to run the elevators and for operating the automatic sprinkler system to protect the buildings in case of fire. This plant is now supplying elec- tricity to 550 arc lamps and 12,000 incandescent lamps beside power to about 360 motors ranging in size from ¼ to 60 horse-power. In addi- tion to the factory in Montreal employing 1,000 people, there are two factories connected with the store proper in which there are 4,700 workers wherein are made women's, misses' and children's wear of all kinds, furs, cloth- ing for men and boys, caps, neckwear, uphol- stered furniture, picture framing, harness, suit cases, jewelry manufactures, etc., the entire output of the factories being sold in the stores. A large well-equipped printing and photo en- graving plant was especially installed for print- ing the company's catalogues, circulars, sales books, stationery, etc., and is able to produce in such quantities that 30,000 catalogues can be mailed each day. As an example of the excellence of the equipment in their printing plant the company secured the government contract for printing and binding the Ontario School Readers in 1909, quoting a price less than half the previous contractor's price, and this by virtue of using labor-saving machinery, some of which they were the first in this con- tinent to import from Europe. The mail order department received so many orders from western Canada that in 1905 it was decided to open a western store and on July 15 of that year a branch was opened at Winnipeg. This store has been greatly enlarged since that time and now occupies 17 acres of floor space and employs 2,900 people. The company has two farms—at Islington and Georgetown—which supply cream to the lunch room, which with the butter making plant absorbs the supply of 800 other shippers who send their products to Toronto. In 1891 Mr. Eaton formed the busi- ness into a joint stock company in which he retained the controlling interest. The company was first capitalized at $500,000, but in 1905 the capital was raised to $1,000,000, of which Mr. Eaton controls the majority, the balance being divided among employees holding responsible positions in the business. Mr. Eaton was also a director of the Dominion Bank.

Such were the results of long years of patient toil and honest endeavor. Mr. Eaton had set up for himself an ideal and did not give up the battle until that ideal had been attained. One ambition of his life was to conduct his whole business on a cash basis, not because of the extra profit to be derived but because he would thus be better enabled to sell cheaper by buying for cash, and cutting out the expense of bookkeeping and bad debts. He began on a small scale so that his business would be securely honest and one in which he could see his way clear to meet every obligation as it matured. He took no chances and was always reasonably sure of the results before he took an important action. Speculation formed no part of his business methods. His transparent honesty made him equally as cautious and he was keenly foreseeing and watchful against possible disaster in order that his integrity might never be impeached. His plan of selling good material at fair or «right» prices and of representing them exactly as they were was simply characteristic of the righteousness with which his every action was impregnated. His prices were marked the same for all classes of customers, and once he had marked what he thought to be the right price, no considera- tion could induce him to raise it. He believed that his business should serve the best interests of the whole community without respect to persons, and that he could serve those interests not only by making his prices «right» but also by making the whole country richer as he en- riched himself. He organized and concentrated the various branches of business in the most economical way possible so that there was a minimum waste of time, energy or money, either in the manufacture, sale or distribution of goods. His methods revolutionized the busi-

dition and was $33,000,000 in debt. The stockholders, mostly Holland capitalists, were weary with delay and misfortune. Because of his faith in the future of the region, Hill sold his interests in the fuel and steamboat companies and in 1878 formed a syndicate of himself, Sir Donald A. Smith, George Stephen (Lord Mount Stephen) and N. W. Kittson, who soon gained possession of the capital stock and defaulted bonds of the railroad. In 1879 Hill reorganized this road as the St. Paul, Minneapolis, and Manitoba Railway Company and became its general manager, subsequently in 1882 its vice-president and in 1883 president.

In 1880 the road was extended to the Pacific coast, traversing vast tracts of land without human habitation. The track was well laid, but the stations were often only freight cars, remote from one another and from other human settlements. The road is now known as the Great Northern. Coal fields were discovered, a branch road carried their product for the use of the main line and settlements formed for preparing the lumber for shipment. To ship valuable lumber eastward was an excellent plan; but to send empty cars after it was out of the question, and Hill conceived the idea of shipping grain for the Japanese steamers to carry to the Orient. An agent was sent to China and Japan to find out what the price of wheat must be to compete with rice, and the result was that the Japanese Navigation Company, the third largest steamship company in the world, began to carry large shipments of grain to China and Japan. Large docks for these steamers were built at Seattle, Washington, the western terminus of the road. The original few hundred miles of completed road of which Hill took charge as manager developed into the present Great Northern system of 7,275 miles. The road extends from Puget Sound to St. Paul, or during the season of navigation to Duluth and Superior, where it connects for Buffalo with its own steamers. A fleet of six freight vessels are added to these. The grain ships moving through the «Soo» give that canal rank over the Suez in point of tonnage.

In developing this scheme the plan increased enormously in the process. Besides laying the foundation of a great fortune, it opened a very rich and vast new country, reached out to new markets for many American products, and brought benefit to great numbers of people. Along the line of the road Hill encouraged the most diversified and productive farming, and introduced new methods and labor-saving devices. He did all this without state or government aid, land grant or subsidy at a capitalization in stocks and bonds of $30,000 per mile and at the rate of nearly a mile per day for every day of his control. He kept the road practically free of strikes, agitations and other annoyances, and the only strike of any consequence occurred in 1894 as a result of the panic of 1893, which caused a reduction in the wages of the employees, but he settled the strike by arbitration.

Early in 1901 Mr. Hill, J. P. Morgan and others negotiated the purchase in equal moieties by the Great Northern and the Northern Pacific of nearly the entire capital stock of the Chicago, Burlington and Quincy Railroad Company at $200 per share, payable in joint 20 year 4 per cent. bonds of the two purchasers. This road comprised nearly 9,000 miles of track and the acquisition was an important one. Meanwhile E. H. Harriman, Kuhn, Loeb and Company, and others, who had purchased the Southern Pacific in behalf of the Union Pacific, felt that the proposed Burlington deal would hurt their property and therefore endeavored to gain control of the Northern Pacific by purchasing stock, but Hill and his associates went into the open market and purchased enough to retain the majority stock in their own hands. In the latter part of 1901, in order to simplify the financial management of his various interests, Mr. Hill organized, and on November 13, 1901, became president of the Northern Securities Company, capitalized at $400,000,000 to buy, sell, own and manage stock and securities of any other corporation. But legal trouble soon followed and the Federal government brought suit against the company as being in violation of the Sherman anti-trust law of 1890. In 1903 when the suit was brought to trial the company was declared illegal; appeal was taken to the Supreme Court but the decision of the lower court was affirmed.

On April 1, 1907, Mr. Hill retired from the presidency of the Great Northern and became chairman of the board of directors, being succeeded in the presidency by his son, Louis W. He is now president of the Northern Securities Company, and is a director in the Chicago, Burlington and Quincy, the St. Paul, Minneapolis and Manitoba Railway Company, the C. and S. Railway Company, the Manhattan Trust Company, the Chase National Bank, the First National Bank of the City of New York, and the First National Bank of Chicago. He is also vice-president of the New York Chamber of Commerce.

Mr. Hill is a man of extensive reading and a lover and patron of the arts. In his residence at St. Paul he has a gallery of paintings by the modern French School of artists which is considered one of the finest private collections in America. His benevolences are many and varied, his most generous donations being for educational purposes. Among his philanthropies are Macalester and Hamline colleges, and St. Paul Theological Seminary, which he erected, and which he endowed at a cost of $500,000 for the training of young men to the Catholic priesthood, though he himself is not of that faith. He is a member of the Union, Metropolitan, Down Town, Larchmont Yacht, New York Yacht, Manhattan, and Jekyl Island clubs. Mr. Hill was married to Mary T. Mahegan, August 19, 1867, and has four daughters and two sons; James Norman and Louis Warren, both of whom have served their apprenticeships in every branch of railroading. The former is vice-president of the Northern Pacific and the latter succeeded his father in the presidency of the Great Northern when he retired in 1907.

John Quincy Adams Ward

John Quincy Adams Ward was born at Urbana, Ohio, June 29, 1830, and died at New York City, May 1, 1910. Mr. Ward owed his name to a Whig father who was an enthusiastic admirer of Andrew Jackson's greatest political enemy. The ancestral Wards landed at Jamestown, Va., in 1607, and some of them moved westward, in the course of time stopping at Urbana, Ohio, where John Quincy Adams Ward was born on June 29, 1830. He never saw a piece of sculpture before he was 15 years old, but long before that time he had learned to make such queer figures with mud and clay that the country people called him «Ward's queer boy.» One day he went to Cincinnati, where he saw for the first time a piece of real sculpture, the work of Hiram Powers. Returning home he attempted to mold figures of his own, without encouragement from his parents, however, who regarded the boy's efforts as foolishness.

Had it not been for a sister, the man who has given to Americans the noble figure of Washington in front of the sub-treasury building might have remained an humble resident of Urbana. The sister came from Brooklyn to visit her parents and managed to arrange for her brother to return with her to New York. The excuse was that his health was bad. But once in Brooklyn he was put under the tutelage of H. K. Browne. Lorado Taft in his 'History of American Sculpture' tells us that Ward remained with Mr. Browne nearly seven years, assisting him in every part of the work, from kneading clay to building up frames for heroic statutes. Thus he learned modeling, casting, pointing, marble carving, and the casting of bronze. He had a hand in everything that was done, and more than a hand in the final product of that period, the great equestrian «Washington» (by Browne) of Union Square, the second equestrian statue modeled in this country.

«It was during the later years of his apprenticeship that he conceived the idea of his «Indian Hunter,» which he modeled first as a statuette in 1857. It was not until 1864 that he executed it in large size, after a long trip among the Indians of the West and Northwest." In the years that elapsed between the first sketch of this Indian and the final work the artist had carefully corrected and documented his first impression by visits to the frontier posts where the Indian, not yet sophisticated out of his character by cheap clothing, was still to be seen at his ancestral pursuits. This lithe, sinewy, crouching, watchful creature had nothing in common with the «classical» athlete. It was a new type of sculpture because it was the result of a faithful study of a type in life. This work was first exhibited in Snedecor's gallery, on lower Broadway. Mr. Ward said in connection with it: «It attracted some attention, and it had not been there very long before a visitor appeared in my studio, announced himself as August Belmont, explaining that he had been interested in my work and then gave me an order for a statue of Commodore Perry. From that day to this I have never been without a commission.»

Ward did not remain long with Browne, but soon set up a studio for himself and received no further instruction in his art. He did not study in Europe, as have most of America's famous sculptors. Later in his life Ward dealt almost entirely with portrait statues, but his next statue, which he modeled in 1862, also had an ideal subject. It was called «The Freedman.» The Shakespeare statue in Central Park was unveiled in 1872. Horace Greeley and Henry Ward Beecher were later represented. The statue of George Washington, at present standing in Wall Street, dates from 1883. His equestrian statue of Hancock added still more to his fame, and in 1892 he was commissioned by the Society of the Army of the Cumberland to make a statue of Sheridan. About this statue there was considerable discussion. The first model which pleased the members of the society did not please the sculptor, and he destroyed it and later models did not please the widow of General Sheridan. The rejection of the sixth and last model followed a disagreement. Mr. Ward declared that the model pleased the members of the Army of the Cumberland, and that his contract was with them and not with Mrs. Sheridan, who was allowed to see the model out of courtesy. As a consequence, he brought suit against the society in 1907.

Besides the statues «The Indian Hunter,» «The Seventh Regiment Citizen Soldier,» «Shakespeare,» and «The Pilgrim,» standing in Central Park, «The Freedman,» and «The Good Samaritan» are in Boston, the Henry Ward Beecher figure faces the Brooklyn city hall, the Commodore Perry statue is at Newport, Israel Putnam at Hartford, General George H. Thomas at Washington, and Hancock in Philadelphia. Mr. Ward also designed the crowning group of «Victory» for the naval arch at the Dewey reception in New York.

The «Beecher» (1891) monument in Brooklyn was an example of his adaptability. The site chosen was a splendid one—a small park in front of borough hall—and he saw that here was an opportunity for a decorative group. So in addition to placing a portrait statue of Beecher upon a pedestal, he did what many French sculptors have done of recent years, he placed some life-sized bronze figures against the granite base. On one side a negro woman reaches up and places a wreath or branch at the orator's feet, as does a little girl on the other side, and seated beside her is a little boy. That these figures are too realistic and not quite yielding enough in their poses, will, we think, not be denied, but the general effect of the whole monument is certainly rendered more picturesque by their presence than it would have been were it just a single figure.

In his «Garfield» (1887) monument, in Washington, he also used emblematic figures on the pedestal. Indeed, in these figures of the

«Warrior,» the «Statesman,» and the «Student,» Ward gave evidence of a scholarly judgment as regards proper adjustment of masses and an ability to model the human form that is not always found in his other works. Another case in which Ward showed his willingness to vie with the younger men in their attempting new things (for this country)—even to the extent of competing with the very greatest achievement of Greek art—was his undertaking of the large «Pediment of the Stock Exchange,» New York. This was a forcible piece of work, though the effect of it to-day in its soiled condition, as seen from the narrow street below, is not an imposing one. Ward's «General Thomas» is thought by many to be his best work. It is a dignified figure of a soldier on horseback, and makes a striking silhouette against the sky.

Mr. Ward frequently spoke in connection with his art, on one occasion saying: «As soon as a man dies in this country his friends and admirers raise a fund to erect a statue for him instead of waiting to see whether the public will be at all interested in him 25 years afterward. The committee which chooses the sculpture is often without taste in matters of art, and the result is often a piece of work which is neither valuable of itself nor of interest in perpetuating the memory of a man to whom history will give no place. We lack homogeneity.

«It is certainly very incongruous for us to glorify in bronze some brigadier general of the late war whose name will soon be confined entirely to history books, while some of the immortal men of the Revolution are not remembered by so much as a tablet.»

In October, 1908, Mr. Ward sold his studio at 119 West Fifty-second Street and practically retired from the active practice of his art. He took the furnishings to his country place near Kingston, where he spent much of his time after his retirement. In November of the same year the report of Mr. Ward's serious illness became public. He never regained his health and for the last six weeks he was confined to his bed. Mrs. Ward was with her husband at the time of his death. Mr. Ward was married in 1859 to Anna Bauman. In 1878, several years after the death of his first wife, he married Julia Dovens Valentine. His third marriage to Rachel M. Ostrander took place in 1906.

Mr. Ward had been an academician since 1863. He was vice-president of the National Academy of Design in 1870-1871 and president in 1872. He was president of the National Sculpture Society from the beginning until 1896. He was vice-president of the Fine Arts Federation, trustee of the Metropolitan Museum, vice-president of the Century Club, and a member of many other art societies. A prominent writer said some ten years ago: «When the history of American sculpture is written the picture of John Quincy Adams Ward ought to form the frontispiece. He is the only American sculptor of present mark who was not educated abroad. His style is imitative of no foreign school, but smacks of the man, of his American ideals, and American surroundings.»

John Bartholomew McDonald

John Bartholomew McDonald was born at Fermoy, Cork County, Ireland, November 7, 1844, and died at New York City, March 17, 1911. His father was Bartholomew McDonald, who, although of an old Irish family, was a laborer and, who, upon his arrival in the United States with his family in 1847, took up a laborer's work on the lines of the New York Central Railroad.

The McDonald family lived near Fort Washington, and there John was educated, first at the Hamilton Free School and later at public school. McDonald, the son, was a hustler. He developed a reputation for honesty and fearlessness, and he worked hard, supplementing his regular school career with night school work. Naturally he first fell into his father's footsteps, and thus during his early years grew interested in the details of contracting. His first regular position was in the office of the register of deeds, but this work held no allurement for him, and he finally succeeded in getting a position as timekeeper on the Croton Dam, which was then being built by the firm of Roach and Jenkins. This work he got through his father, who at this time was a general foreman for the same company. Young McDonald did so well and studied his work so thoroughly that he was recommended for the position of inspector on the New York Central's Park avenue improvement work. Here he got a knowledge of tunnel construction which was invaluable to him throughout his life. He learned so quickly and was so efficient that in 1872 he was made chief inspector.

McDonald now determined to go into contracting himself and accordingly associated himself with the firm of Dillon, Clyde and Company, who built the portion of the New York Central tunnel on Park avenue where it breaks out into the open cut at Ninety-sixth street. From now on the work came fast. Dillon, Clyde and Company gave way to the firm of Smith and Ripley, and for this latter organization McDonald handled one of the sub-contracts for the far-famed Hoosac Tunnel, which for years was the most stupendous piece of subterranean engineering work ever attempted in the United States. Breaking away from all connections, the contractor now went into the field for himself. He built the Trenton cut-off for the Pennsylvania railroad. He put through big contracts on the West Shore railroad, on the Potomac Valley and on the Illinois Central. He did work on the Canadian Pacific and completed the extension of the Baltimore and

ıio line from the Maryland city to Philadel-
ıia. Then Mr. McDonald became president of
e Pennsylvania and Maryland Construction
ɔmpany. He now performed a task which
ıve him a reputation second to that of no con-
actor in the country. This was the concep-
ɔn and building of the tunnel and belt line in
altimore, an undertaking which involved mil-
ɔns of dollars. This system is one which to-
ıv extends under a large part of the business
ɛction of Baltimore. Mr. McDonald now took
p his residence in Baltimore and assumed the
residency of the South Baltimore Car Works,
s well as that of the East Ohio Railroad.
'hen he got his next big contract, that of con-
tructing the great Jerome Park reservoir in
Jew York. This was in 1898. At the time the
stimate for the cost of the undertaking was
6,000,000.

Shortly after securing this contract came the
ɔne which finally and definitely placed him at
he head of his profession. This was the con-
:ract to construct New York's present subway.
It was signed in January, 1900. How thor-
ɔughly Mr. McDonald performed his task, and
how worthy he proved himself of the confidence
of the city and of the Interborough Rapid
Transit Company, are matters of common
knowledge. The work extended over four years
and was of the most trying sort, as the condi-
tions to be met in laying four tracks abreast
under the city's busiest streets were almost
without precedent. But the master contractor's
intimate knowledge of every possible phase and
detail of his work permitted him to carry it all
through without a hitch. In December, 1904,
because of certain misunderstandings between
himself and the Belmont interests, Mr. McDon-
ald resigned from the directorate of both the
Subway Construction Company and the Inter-
borough Rapid Transit Company and then a lit-
tle after affiliated himself with the Metropolitan
Street Railway Company, in the expectation
that the latter organization was about to under-
take the construction of further subways. In
1907 he explained to the Public Service Com-
mission that, from his point of view, he had
been misled. This was after the merging of
the Interborough and Metropolitan companies.

The construction of the subway was Mr. Mc-
Donald's last big contract, but during the years
of his activity in New York the contractor ac-
quired numerous real estate interests which in
late years gave him the opportunity of a cer-
tain amount of leisure. His favorite relaxation
was golfing, although he spent much of his time
on the water. He was a member of many clubs
and associations, his name appearing on the
rolls of the Apawamis, Country, Ardsley, Oak-
land Golf, and Kenvale Golf clubs, the New
York and Larchmont Yacht clubs, the Lambs,
Pilgrims, Manhattan, and Democratic clubs, the
Friendly Sons of St. Patrick, Tammany Hall,
and the Chamber of Commerce. But Mr. Mc-
Donald was a free thinker; and, although he
was an enrolled Democrat and a Tammany
man, he supported Hughes in 1906, resigning
from the general committee of Tammany Hall
and contributing $1,000 to the Republican cam-
paign fund.

Although not a college or university graduate
the master contractor received a number of hon-
orary degrees, among them being the degree of
doctor of science from Queen's University at
Kingston, Canada, in 1905. Mr. McDonald was
survived by a widow and an only daughter.

Robert Wood Johnson

Robert Wood Johnson was born at Carbon-
dale, Pa., February 15, 1845, and died at New
Brunswick, N. J., February 7, 1910. He came
from the stock of the sturdy pioneers of Rhode
Island and Pennsylvania and with the charac-
teristic energy and clear foresight of his ances-
tors he himself established an enviable record
as a pioneer and a progressive factor in a mod-
ern and one of our most important industries.

Having received only a preliminary education
the young man became an apprentice in phar-
macy but after a short term of service in this
connection established himself as a drug broker
in New York City. It was not long before he
perceived that many of the methods in vogue
in the manufacture of pharmaceutical materials
could be vastly improved, the principal articles
to which his attention was most forcibly at-
tracted being medical and pharmacopeial plas-
ters. He thereupon determined to devise a
better process, and the outcome of his desire
was the organization of the firm of Seabury
and Johnson. His ambition to make a distinctly
progressive step in the art of plaster-making
was achieved when the firm began the manufac-
ture of the plasters of the pharmacopeia with
an India rubber base. In 1886 Mr. Johnson
withdrew from the firm of Seabury and John-
son, and founded the firm of Johnson and
Johnson, becoming its president and remaining
in that capacity until his death in 1910.

As Mr. Johnson had now had many years of
training as a pharmacist and business man, and
was thoroughly familiar with the art of plaster-
making, he entered the new firm perfectly
equipped. But he was not content to conduct
his business according to old standards and im-
mediately began to create for himself a new
field. Realizing the defects and imperfections
of the old methods he resolved to strike out
into paths unknown, always endeavoring to
make each new operation an improvement over
its predecessor. He believed that plasters
«should not only be mechanically perfect and
cheap, but above all they must be therapeutic
agents, they must do good, they must help to
alleviate pain and to cure disease.» Conse-
quently Mr. Johnson was an ardent searcher
for any process, applicable to his products, that
predicated an advancement, and this was prob-

ably the keynote to his success as a manufacturer of surgical dressings.

At this time the methods advocated by Lister were beginning to receive some notice in this country, yet while Mr. Johnson heartily endorsed Lister's methods he saw that the apparatus and dressings necessary to carry out Lister's ideas were too cumbersome for general and practical use and that the successful application of antiseptics was impossible except in large hospitals with extensive facilities. Mr. Johnson therefore determined to improve upon Lister's methods so that they could be universally applied. Among the first steps he took in the furtherance of his ideas was to publish a book entitled 'Modern Methods of Antiseptic Wound Treatment.' This book was a compilation of the notes and suggestions of eminent surgeons who had practiced the new methods and it also contained a description of dressings suited to antiseptic practice. At the time of its publication this was the only book giving a clear idea of the new surgical methods. The next step was to plan devices of putting up the new dressings in such form that they could be distributed and dispensed without change or contamination; so that they could be sent to the most remote point in perfect condition; and of such a simple character that they could be used by anyone. He furthermore kept in close touch with the surgical profession and whenever an improvement upon an old method was suggested he was always ready to manufacture the article according to the stipulated requirements or because of his long experience as a pharmacist to suggest any change that might enhance its value.

Mr. Johnson thoroughly believed that surgical dressings should be perfectly clean and that in order to make them so it was necessary that they be manufactured in an absolutely clean place. In accordance with his ideas he erected buildings that were clean and sanitary in every respect and that could be kept so; he employed skilled operatives; and in manufacturing his products strictly adhered to the most advanced rules of aseptic and antiseptic surgery. These principles naturally begot confidence in his wares and his business grew to enormous proportions. But while he prospered, the articles he manufactured did not always prove to be profitable and the fact that he continued to produce at a loss an article which he considered to be of benefit to mankind is one of the most pleasing testimonials to his high character that could be given. He believed that medical requirements should be faithfully fulfilled regardless of cost; that quality, appearance and purity without consideration of profit were the most important factors in securing and retaining the good will of patrons; and that if a preparation would save life or prevent suffering it should be manufactured for general distribution and sold at a price within the reach of all, even though the price might inflict a pecuniary loss upon himself. His every thought was humanitarian and his highest ambition was to improve the methods of manufacture in order that the cost of the finished product might be reduced and yet at the same time to so increase the usefulness and better the quality of the article that it might attain universal application.

Therefore Mr. Johnson, probably more than any other single person, is entitled to receive credit and honor for making the discoveries of Lister popular and for putting into practical operations the many suggestions made for advancing and perfecting the technique of surgery. His strong and pleasing personality and untiring energy completely captivated and won the loyalty and affection of his employees who aided in developing the great industry which now stands as a monument to his life's work. And he cordially and warmly reciprocated this loyalty by caring for his employees in times of sickness and providing pensions for those long in his service. The most beneficent result of his many years of patient toil, however, is to be found in hospitals, operating rooms and sick rooms, for it is due to his constructive genius that much of the pain and distress attendant upon surgical operations and other sickness have been alleviated. These are the deeds that will perpetuate his memory.

Mr. Johnson died at his home in New Brunswick, N. J., February 7, 1910, after a short illness.

Thomas Alva Edison

Thomas Alva Edison was born at Milan, Ohio, February 11, 1847, the son of Samuel and Nancy Elliott Edison. The ancestral Edisons came from Holland, as nearly as can be determined, in 1730; they were descendants of extensive millers on the Zuyder Zee and took up patents of land along the Passaic River in New Jersey not far from the place where Edison established his home 160 years later. They first settled near Caldwell, N. J., became fairly well-to-do and evidently enjoyed public confidence for we find the name of Thomas Edison, as a bank official on Manhattan Island, signed to Continental currency in 1778. His son John was a loyalist and became one of the refugees in Nova Scotia, but in 1811 he went west to Bayfield, Upper Canada, on Lake Huron, and later moved to Vienna, Ontario, on the northern bank of Lake Erie. Mr. Edison's father, Samuel Edison, was a member of the insurrection in Canada under Papineau and Mackenzie, which broke out because of unjust taxation. When the insurrection was subdued by Earl Durham, Samuel Edison moved to the United States and in 1842 settled at Milan, Ohio, where Thomas A. was born.

As a boy Thomas A. Edison had an abnormally large though well-shaped head and as the local physician feared he might be subject to brain trouble, he was not allowed to attend school for several years. In 1854 when Thomas was seven years of age, the family

›ved to Port Huron, Michigan, but though ; father was in comparatively comfortable cir- mstances the boy's public school education ıs somewhat neglected, chiefly because his ›ther, who was a well-educated woman, had poor opinion of the public schools and pre- rred to undertake the instruction and train- g of the boy herself. Though only 10 years age Thomas began to show a decided incli- tion toward chemistry and was constantly :perimenting in the cellar of his home where : had collected what for that time and a boy his circumstances was a fairly complete ıemical outfit. But the buying of chemicals pidly consumed the scant pocket money of e lad and he determined to become a news- ›y on a train in order to earn more than his lowance. He selected this work because while e was earning money he could at the same me secure fresh reading in the shape of papers nd magazines free of charge and would also e able to spend his leisure hours in the public brary at Detroit.

At the age of 12 years he therefore made pplication for and secured the right to sell ewspapers, magazines, etc., on the Detroit and 'ort Huron branch of the Grand Trunk Rail- vay and being an industrious lad he soon had ›ther boys working for him, selling papers, andy, etc., on the trains of the line. While in his capacity, in 1862, he bought a small hand ›ress and edited, printed and published a small ›aper of his own, naming it the 'Grand Trunk Herald.' It had a circulation of 400 copies ımong the employees of the railroad. He pros- ›ered in this undertaking, making a sum of money which loomed big in his eyes and after giving a certain portion of his earnings to his mother, he used the remainder to purchase chemicals for experimentation. He fitted up an unused portion of a baggage car as a laboratory and during such times as he was unoccupied with his duties as newsboy he was conducting experiments in his little shop. He continued this for some time, but one day his laboratory was upset by the lurching of the car on an uneven roadbed and some phosphorus set the car afire. The conductor extinguished the fire with water but at the next station he ejected Edison and his entire outfit, laboratory, print- ing plant and all, and in addition boxed his ears so severely that he has been deaf ever since.

Edison had now become much interested in electricity and began experimenting with tele- graph lines, a primitive apparatus being rigged up by himself and a boy friend between their homes. An incident happened at this time which served to advance the boy's knowledge of telegraphy. The little son of the station agent at Mount Clemens, Mr. J. U. Mac- Kenzie, had wandered onto the railroad tracks and was playing with the gravel on the track directly in the path of a rapidly approaching train. Young Edison immediately saw the dan- ger and dashed in front of the train, seized the child and sprang to safety, though both were severely cut about the face and hands. The grateful father at once offered to teach Edison the art of train telegraphy and to make an oper- ator of him and the proposal was eagerly ac- cepted. After several months of study and practice he accepted a position in the telegraph office at Port Huron, but after a short stay he became a night operator on the General Trunk Railroad at Stratford Junction, Canada. This was in 1863. His dislike for routine work, how- ever, together with his fondness for reading and his passion for experimentation, caused him to somewhat neglect his duties and he lost this and several subsequent positions, then in a period of aimless drifting, being thrown among that class of the telegraphic fraternity known as "tramp operators."

The term of his wanderings in the central West did not end until 1868, and in his pere- grinations to secure work he visited many of the cities from Detroit to New Orleans, includ- ing Indianapolis, Cincinnati, Louisville, and Memphis, some of which he visited twice. At Indianapolis he secured a position in the fall of 1864 as an operator for the Western Union Telegraph Company at the Union Station. While here he invented an automatic telegraph repeater which worked very well under ordi- nary conditions and enabled him to turn out neat and clean copy, but when the press reports were to be rushed through the machine did not operate rapidly enough, and upon complaint by the newspapers the scheme was forbidden. In February 1865, therefore, he resigned and went to Cincinnati where he subsequently was raised to a first-class operator at $125 per month. But the "wanderlust" seized him again and he went south, going as far as Memphis, Tenn., then to Decatur Ala., and Louisville, staying at the latter place for about two years, then going to New Orleans, where he intended to embark for South America but the conditions existing in that city prevented and he returned north again, after many vicissitudes, finally landing in Boston in 1868.

Upon his arrival in Boston he entered the Western Union office. He soon became ac- quainted with Mr. Charles Williams, then at the height of his career as a maker of electrical apparatus, and often visited his shops where, with the aid of one of his men, he worked out into an operating model his first patent, for which papers were executed on October 11, 1868, and which was taken out June 1, 1869, No. 90,646. This device was to instantly record the vote of the members of the House of Rep- resentatives by pressing a button on each desk, but as this would do away with the fillibustering methods in vogue the politicians did not care to see his invention installed. After this he invented a stock ticker and started a ticker service in Boston, soon having from 30 to 40 subscribers. He then went to New York where he attempted to sell this device but was unsuc- cessful and returned to Boston and there in- vented a duplex telegraph which he tested on the lines of the Atlantic and Pacific Telegraph between Rochester and New York. But the cost of this was so great that he was compelled to give up and then went to New York where happening into the battery room of the Gold Indicator Company he found the entire system out of order and proceeded to fix it, as the regular operator had become so excited that he lost all control. Dr. Laws, the head of the company, had observed him at work and the next day offered him a position as manager of the plant at a salary of $300 per month. He accepted the position, made many improvements in the service and devised several stock tickers

until the Gold and Stock Telegraph Company was merged with the Gold Indicator Company.

In 1869 Edison formed a partnership with Franklin L. Pope and J. N. Ashley as Pope, Edison and Company, electrical engineers. He then made a large number of improvements on the stock ticker, of which the "Universal" ticker was one result. For his patents he was given $40,000 by General Lefferts, president of the Gold and Stock Telegraph Company. This gave him the long cherished opportunity of establishing an extensive laboratory and he immediately set to work buying machinery and other apparatus which was installed in a shop at Newark, N. J. He secured large orders to build stock tickers and employed 50 men, but business increased so rapidly that he put on a night force. Work of various kinds poured in upon the young manufacturer and during 1870-71 he started three more shops in Newark, and while directing those was also engaged by the Automatic Telegraph Company of New York to help it out of difficulties. He now tackled the problem of automatic transmission with his wonted energy and devising new apparatus solved the problem to such an extent that 1,000 words per minute could be transmitted and recorded between New York and Washington and 3,500 words per minute to Philadelphia. The system was put in operation and Edison was set at work on an idea for printing the messages in roman letters instead of the Morse code of dots and dashes, and successfully accomplished this.

In 1873 Edison was sent to England to make a demonstration of the automatic system to the British Postal Telegraph authorities with a view to securing its adoption in England. The test was completely successful and the automatic was finally adopted in England. Returning home he resumed work on various appliances, chiefly duplex and quadruplex telegraphy, and so active was he that together with the work done prior to his trip to England, in 1872 he applied for 38 patents in the class of telegraphy and 25 in 1873. In 1873 he brought out the duplex telegraph but interest in this dwindled as the quadruplex loomed up. The principle of the latter is that of working over the line with two currents from each end that differ from each other in strength or nature so that they affect only instruments adapted to respond to just such currents and no others. He now sold his invention to the Western Union Telegraph Company receiving $5,000 as part payment, but not receiving the balance of the price, agreed to sell his interest in the invention to Jay Gould for $30,000. Shortly afterward he invented a district messenger call-box system and after his company had been organized sold it to the Atlantic and Pacific Company. Toward the close of 1875 Edison invented a device for multiplying copies of letters which he sold to A. B. Dick of Chicago and as introduced commercially, it is known as the mimeograph. He also invented devices for and introduced paraffin paper, now universally used for wrapping candy, etc.

Bell had invented the telephone in 1876, but while Edison always gave him credit for the discovery of the transmission of articulate speech by talking against a diaphragm placed in front of an electric magnet, still Edison himself had actually produced a device that could talk in 1875 and had included this device in a caveat filed January 14, 1876, a month before Bell. The latter had simply taken the one great step further. But Bell's telephone failed commercially on account of its faintness and extraneous sounds coming in on the wires and Edison was asked to commercialize it. Starting in on his experiments he soon produced the carbon transmitter now universally used and to-day every telephone in the land bears the imprint of his genius as at one time the instrument bore his stamped name. For years his name was branded on every Bell telephone set and his patents were a mainstay of what has been popularly known as the "Bell monopoly." Edison received $100,000 for these patents. His inventions in this line extend over a period of many years and include all kinds of carbon instruments—the water telephone, electro-static telephone, condenser telephone, chemical telephone, various magnetic telephones, inertia telephone, mercury telephone, voltaic pole telephone, musical transmitter, and the electromotograph. For the electromotograph Edison was paid $100,000 by the Western Union. For the British patents on a similar instrument he was paid £30,000 by the English Bell Company. After this came the microphone.

Sometime prior to 1877 Edison had been experimenting on an automatic method of recording telegraph messages on a disk of paper laid on a revolving platen, exactly the same as the disk talking machine of to-day. During the course of his experiments he came to the conclusion that with a paper diaphragm and disk he could record and reproduce the human voice. Instead of a disk he used a cylinder provided with grooves around the surface over which he placed tinfoil so that the movements of the diaphragm would be easily received and recorded. The machine was a success and taking it to the office of the 'Scientific American' he showed it to Mr. Beach, who became greatly interested in it. The fame of the machine spread over the land and Edison was requested to give demonstrations of his machine in several cities. A Phonograph Company was formed and Edison was paid $10,000 cash and a 20 per cent. royalty. Since that time the phonograph has changed little, having simply been refined and made more perfect in a mechanical sense so as to be converted from a scientific toy into a successful industrial apparatus, the chief changes being in the wax cylinder, the recorders and reproducers. The invention of the phonograph also led to the appearance of several other devices such as the telephonograph, the modern megaphone, the aerophone, the phonomotor, etc.

In 1877 Edison began his experiments on the incandescent lamp, but various interruptions occurred and it was not until the latter part of 1879 that he succeeded in producing one. One of the troubles was to secure material for filaments and Japanese bamboo was used for many years, but Edison spent nearly $100,000 and years of time sending emissaries over the world in a vain hunt for a better material. Bamboo was used until the early 90's but at that time gave place to the carbon filament and later the carbon gave place to filaments made from tantalum and tungsten.

Meanwhile he devoted a portion of his time to devising a system of general electric lighting for which it was necessary that he invent a method of distributing the current, devise a lamp that would give the same amount of light as a gas jet, provide a meter for determining the amount of electricity used, elaborate a system of conductors that could be tapped at any place, maintain a practically even pressure of current at all points in an extended area of production so that all lights would give an equal light at all times, provide sufficient dynamos, etc. Gathering around him nearly 100 skilled mechanics and artisans of a high order of ability, he began work on the problem and in January, 1880, his patent application for a "System of Electrical Distribution" was signed though it was not isseud as a patent until August 30, 1887. During 1880 Edison made application for 60 patents of which 32 were in relation to incandescent lamps; 7 covered inventions relating to distributing systems; 5 related to inventions of parts, such as motors, sockets, etc.; 6 related to dynamo electric machines; 3 to electric railways; and 7 to other apparatus such as telegraph relays, magnetic ore separators, magnetic signalling apparatus, etc. The years 1880-1883 were the most prolific periods of invention and since 1880 Mr. Edison has taken not more than 375 patents in the art of electric lighting, of which 149 are for incandescent lamps and their manufacture, 77 for distributing systems and their control and regulation, 106 for dynamo-electric machines and accessories and 43 for minor parts, such as meters, switches, sockets, etc. Among the more important of these are the "Feeder" and "Three-wire" inventions.

There had been opposition to the electric light chiefly because of ignorance of its construction and operation and it was not until 1882 that the initial lighting plant was installed in New York ready for service. At about the same time plants were started at Appleton, Wis., Brockton, Mass., and Sunbury, Pa., at Lawrence and Fall River, Mass., in the latter part of 1883, and at Newburgh, N. Y., in the following spring; at Santiago, Chile, in the summer of 1883; at Berlin, Germany, in 1885; in various hotels, theatres, etc. The system of lighting gradually came into favor and is rapidly replacing gas in residences, public buildings, etc.

Edison had no sooner designed his dynamo in 1879 than he adopted the same form of machine for use as a motor. Early in 1880 he began the construction of a track close to Menlo Park and built an electric locomotive to operate over it. On May 13, 1880, the first experiment was made and while not a complete success was so encouraging that Edison continued his experiments and soon produced an electric locomotive that operated smoothly and surely. He then built an electric railway 2½ miles long, under a contract with Henry Villard, president of the Northern Pacific, that if the experiments were successful under the conditions named, the Northern Pacific would install at least 50 miles of electric road in the wheat regions. The experiments more than bore out Mr. Edison's assertions, but at that time the Northern Pacific went into the hands of a receiver, and the plan was therefore dropped. Edison also devised the third rail and shoe for railroad trains but engineers declared it to be absolutely and utterly impracticable, though since that time it has come into wide use. Mr. Edison has also experimented with the storage battery for street car lines and at times there have been cars in operation in Washington, New York, Chicago, and Boston, but the cost of operation and maintenance was so high that they were discarded. In 1910 the attempt to use this type was renewed in New York, Mr. Edison having perfected the battery so as to be less expensive, and at the present time (1911) the experiment seems to foretell complete success.

In the early 80's the eastern steel trade was beginning to decline because of the discovery of enormous deposits of iron ore in Michigan where it could be mined and sold very cheaply. It was seen that the east would be compelled to fall back on the low grade magnetic ores. How to make this ore available for transportation was the question and Edison began thinking on the tremendous problem. The chief problem with which Edison had to contend was the size of material to be treated. Given a mountain of rock containing only one-fifth to one-fourth magnetic iron and it was necessary to tear down the mountain, grind it to powder, and extract the particles of iron from the powder while at the same time this was to be done at a sufficiently low cost to make the proposition commercial. He planned crushing and separating machinery and early in the 90's established concentrating works in New Jersey wherein he not only developed thoroughly the refining of the crushed ore, so that after it had passed the 480 magnets in the mill, the concentrates came out containing 91 to 93 per cent. of iron oxide, but he also devised collateral machinery, methods and processes all fundamental in their nature. Having completed his plant he was ready to start operations and could have supplied his concentrated product at the prevailing prices at a profit but the discovery and opening up of deposits of rich Bessemer ore in Minnesota which was cheaply mined, drove the price of crude ore of like iron units down from $6 to $3 per ton, at which price Edison was left without a reasonable chance of competition. The plant on which he had spent years of incessant thought, labor and care and which embraced some of his most brilliant and remarkable inventions and methods was therefore abandoned. Into this project Mr. Edison had embarked a large part of his fortune and it was deeply in debt but he would not allow a single enterprise with which he was connected to go under without paying its debts. It was therefore decided to build a plant for the manufacture of Portland cement and that Edison would develop a storage battery which did not use lead and sulphuric acid. In the course of three years the indebtedness of the concentrating works was paid off, amounting to several hundred thousand dollars.

Mr. Edison also devised new machinery, kilns, etc., for his cement works, which at first was ridiculed by old cement manufacturers, but when Edison's devices proved successful they were glad to adopt his ideas and to-day more than one-half of the Portland cement made in the country is produced in kilns of the Edison

type. One of his most recent devices in connection with the cement industry is the "Poured Cement House," whereby cement is poured into moulds and being hardened forms a solid house, water proof, comfortable and of pleasing appearance.

Edison's phonographs and his motion pictures have more audiences in a week than all the theatres in America in a year. He began experiments on a moving picture machine in 1887 and experienced difficulty from the very start both in taking pictures at high speed and in reproducing them at high speed without jerkiness. With the aid of the experts of the Eastman Kodak Company, who produced a highly sensitized fine grained emulsion which presented the surface that Edison sought, Edison was enabled to take pictures at the rate of 20 to 40 per second. The earliest form of exhibiting apparatus, the Kinetoscope, was a machine in which a positive print from the negative obtained in the camera was exhibited directly to the eye through a peephole; but in 1895 the films were applied to modified forms of magic lanterns, by which the images are projected upon a screen. Since that time the industry has developed rapidly and at the present time all of the principal American manufacturers of motion pictures pay Edison a royalty under his basic patents.

In 1900 Mr. Edison undertook to solve the problem of storage batteries. He made several thousand experiments on all kinds of materials until he became convinced that nickel and iron possessed the qualifications he desired. With a little handful of selected experimenters he now settled down at his chemical plant at Silver Lake, N. J., and worked night and day until he had completed the commercial cell, which with a few improvements stands among the best at the present time. This has been used in a few of the street cars of New York as previously stated.

Since Edison took out his first patent in 1869 no less than 1,400 patents have been applied for in his name, 1882 being the year in which the greatest number of applications were filed—141. In addition 120 caveats, embracing not less than 1,500 inventions have also been filed. Among his miscellaneous inventions are a system of train telegraphy; an X-ray apparatus; the microtasimeter for detection of small changes in temperature; devices for preserving fruit *in vacuo*, for making plate glass, for drawing wire, for treating nickel, gold and copper ores, etc., the list being entirely too long to give here. It is only necessary to say that there is not an electrical instrument or an electrical process now in use but bears the mark of some great change wrought by the most ingenious of Americans.

Edison is a man of remarkable personality. To those who believe his work is the product of an inspiration given by nature to but few, the story of the manner in which he achieves success will seem shockingly unromantic. In the genius who works by inspiration Edison has no great faith. "Genius is 2 per cent. inspiration and 98 per cent. perspiration" is the incisive, epigrammatic answer he once gave to a man who thought that a genius worked only when the spirit moved him. Not being given to scientific rhapsodies, Edison does not concern himself with what may be of service a century hence: he confines himself vigorously to the needs of the present. Knowing full well that he is probably not the first who has set for himself the task in the performance of which he is engaged, he reads all that is pertinent to his subject in the vast library which forms an important adjunct of his laboratory. Not content with the information gathered from his own shelves his literary agent is ordered to send him more. After a thorough review of his subject, Edison begins laboratory work—an expert keenly alive to the failures of his predecessors, careful to avoid useless repetitions of old experiments. It is now that the 2 per cent. inspiration gained by exhaustive reading and the 98 per cent. perspiration which is ready to expend are applied. Experiments are made, not a few, but hundreds and even thousands. Model after model is built. Failure after failure is met with, until further efforts seem hopeless. Undismayed, Edison performs more experiments, builds more models. Failure spurs him on. At last an experiment is performed or a model made which gives faint encouragement. So far from being elated, he regards the promising result with great suspicion. The failures have been too many; the apparent success after all may be due to an incidental combination of circumstances that may never occur again. Only after the partial triumph has been confirmed by many trials does complete assurance come. Edison knows exactly what he wishes to accomplish, and how his end is to be attained. Absolute certainty of purpose and of method saves him from frittering away his time in useless experimentation. Chance has given perhaps an occasional idea, but it has not lightened his work. Tireless perseverance and long hours of work are the secrets of Edison's success. When working on the new storage battery Edison devoted his exclusive attention to the invention and for over a year he worked harder than a day laborer. He was at his laboratory at 7:30 in the morning. His luncheon was sent to him. In the evening he left for dinner, but returned at 8. At 11:30 at night his carriage called for him; but often the coachman had to wait for three or four hours before the inventor came out of his laboratory. Yet when vacation time comes and with it a chance to leave his laboratory, Edison plays just as he works, with his whole heart and soul. He will hear nothing of business. Science is thrown to the winds.

Mr. Edison has received many awards, decorations, and medals for his work. In 1878 he was made chevalier of the Legion of Honor by the French government, a commander of the Legion in 1889, and was the recipient of the insignia of a grand officer of the Crown of Italy bestowed the same year by King Humbert. In 1892 he received the Albert medal of the Society of Arts of Great Britain. In 1878 Union College conferred upon him the degree of Ph.D.

He was married in 1873 to Miss Mary Stillwell, who died in 1884, leaving three children: Thomas Alva, William Leslie, and Marion Estelle. In 1886 he was again married to Miss Mina Miller, daughter of Lewis Miller, a pioneer inventor and manufacturer in the field of agricultural machinery.

Paul Morton

Paul Morton was born at Detroit, Mich., May 22, 1857, and died at New York City January 19, 1911. He was the son of J. Sterling Morton, an easterner, who later cut loose from the settled district and had cast his lot in the yet undeveloped plains of Nebraska. It was in that state that Paul grew up, most of his early years being passed at Arbor Lodge, Nebraska City. His father was a man of means, who was secretary of agriculture in the cabinet of President Cleveland, but his son had no wish to go to college. Instead he entered active life by taking a clerkship in the Omaha office of the land department of the Burlington and Missouri Railroad.

In those days in western railroading everything was new. Paul Morton had seen the ox team and stage coach, which formed at first the only means of transportation across his state, and as the line was built up there was plenty of room for the display of ingenuity and resource. Young Morton set himself to develop the business of the company, and when he was transferred to the freight department of the company he was called upon to exercise all the tact and foresight of a leading official. In addition, Mr. Morton had to meet with the difficulties caused by overcoming the prejudices of pioneers and the conflicts between ill-defined state and national laws. Above all, in a new country of vast extent, it was essential that he should get business to pay the running expenses and afford the funds for the extensions which would alone build the system up into a profitable concern. Sparing in his personal habits, determined from the first to live within his income, he carried out the same principle in dealing with the railroad.

The Chicago, Burlington and Quincy took over the Burlington and Missouri, and he was made successively general passenger agent and general freight agent. Then in 1890, when the system had been thoroughly established, he withdrew for a time from railroading. He went into the coal business, and became vice-president of the Colorado Fuel and Iron Company, and president of the Whitebreast Fuel Company. However, he was too good a man to be lost by the transportation interests, and in 1896 he was elected a vice-president of the Atchison, Topeka and Santa Fé. In this position he initiated a broad policy of building up the territory through which the road ran, which showed at its best the colonizing function of a great railroad in a new country. He adopted the view that the railroad could only prosper if the people it served were prosperous, and he did all he could to assist those who were likely to be good clients of the line.

His policy led to accusations that the road was giving rebates. It appears that there was a long-standing custom of so arranging the rates as to further the coal industry in Colorado and New Mexico. In the days before the Elkins law this was only one instance of the favors granted to large shippers, and it was of so ordinary a nature that it excited little remark. It was not disputed that by means of the rates charged an infant industry had been placed on its feet, and, as the Inter-State Commerce Commission officially stated, "only became conspicuously unlawful after the passage of the Elkins law in 1903 and the courageous investigation and report of the facts by the Inter-State Commerce Commission to the Attorney-General."

As vice-president in charge of the traffic department of the Santa Fé Mr. Morton was technically responsible for what was going on. A series of suits were brought against the company, and ex-Attorney-General Judson Harmon, now governor of Ohio, and A. M. Judson were employed by President Roosevelt to prosecute them. In their investigations they found that the Colorado Fuel and Iron Company had, as rival concerns had charged, received favors from the railroad, and they recommended that Mr. Morton and other officials should be personally prosecuted for these practices. But Mr. Morton had already, in 1904, been appointed to the secretaryship of the navy by Mr. Roosevelt, who was an old friend of Mr. Morton's father. The President referred the matter to Attorney-General Moody, and he decided that the personal responsibility could not be enforced. Certain legal questions with respect to the injunction issued against the railroad which, it was alleged, had been infringed, were involved, and Judge Phillips of the Kansas City Federal court declared that there was no evidence to show that Mr. Morton or any other official had violated the court's order. In these circumstances Mr. Moody decided that there was no ground for personal prosecution of Secretary Morton, and President Roosevelt wrote to him agreeing heartily with his decision. Mr. Harmon took a strong view on the other side, and his protests against the dropping of the personal suit caused a breach between him and President Roosevelt. The Inter-State Commerce Commission thus summed up the question of Mr. Morton's responsibility in an official statement:

> "There was a technical violation of the law involved in the transaction, as has always been plain, but that there was criminal intent on the part of Mr. Morton and the other officials has always been denied, and the avowed purpose of the practice tends to support that view."

Secretary Morton stayed at Washington for exactly one year, from July 1, 1904, to July 1, 1905. He was not long enough in the department to produce much effect on the organization of the navy, but what he accomplished was in the direction of efficiency and economy. He is remembered for his impatience of red tape and ceremonial, and the steps he took to consolidate the power plants in the various navy yards and to reorganize the business methods in vogue. In purely political affairs Secretary Morton was not, however, much at home. He refused to take the active part in politics that is usually expected of cabinet officers, and he devoted himself entirely to the duties of his department. It has been said of him that he summed up the problems of the navy in this direct fashion: "Construction, instruction, and

destruction." He was a believer in building ships of the largest size and the most powerful armament possible, and declared in an interview that he considered that the cost of a great navy to a country with such possessions as the Philippines and Hawaii was not worth considering if it was looked on in the light of insurance. In the deliberations of the cabinet, apart from his official duties, he was of great service through his thorough knowledge of the railroad business. It is believed that the very man who was subjected to attack as a rebater materially assisted the government officials by putting at their service his intimate acquaintance with the mysteries of freight rate making.

Meanwhile the great insurance scandal had broken out, and the entire financial world was in dismay at the feeling of distrust with which Wall Street and its methods were regarded by the country at large. Thomas F. Ryan solved part of the problem by purchasing the control of the Equitable Life Assurance Society from James Hazen Hyde, and then looked around for a man of national reputation to head it. He found him in Mr. Morton, and he induced him to leave the cabinet to give the benefit of his name to the insurance company. From the day Mr. Morton arrived in New York, the troubles of the Equitable began to fade into the background. He eliminated practically all the men whose names had been associated with the internecine disputes of its trustees and he set himself by conservative finance to build up again the company's reputation as a concern to which the investor of small means might safely trust his life savings for the benefit of his widow and orphans. Within the company Mr. Morton's administration made for economy and conservatism. He reduced agency expenses and he appointed young and energetic men. Above all he removed the atmosphere of secrecy that had clouded the society under its old administration. To the newspapers seeking legitimate information about the society and its financial concerns every facility was afforded. Bit by bit the reputation of the society was built up again. Though it had suffered more severely than any of the insurance companies as a result of the insurance investigation, it has now for two or three years been completely rehabilitated. When Mr. Morton purchased the control of the Equitable from Mr. Ryan, Mr. Morton was continued in office, and it was intended to continue the policy which he had so successfully inaugurated.

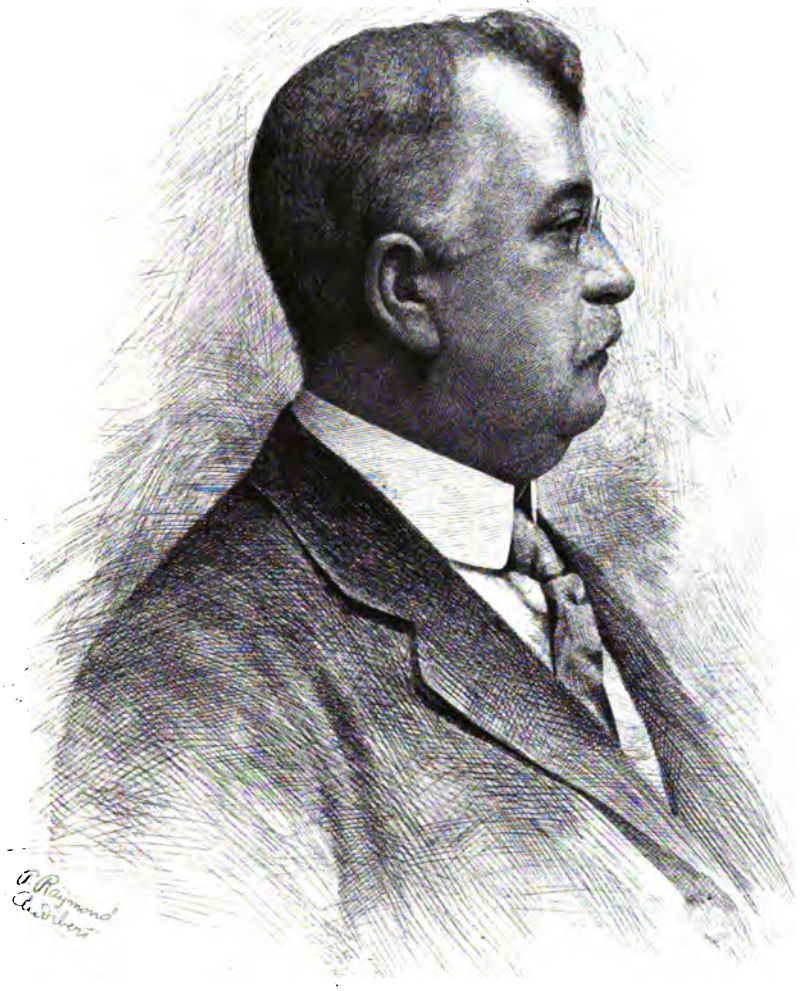
Mr. Morton married in Chicago on October 13, 1880, Miss Charlotte Goodridge, and had two daughters: Caroline, wife of William C. Potter, a mining engineer of Mexico City, and Mrs. J. Hopkinson Smith, Jr. Personally he was a man who charmed all who came near him. Well over six feet in height and well proportioned, there was business-like directness about him that inspired trust in all his doings and sayings. To his subordinates and those who came in contact with him he was considerate in every way, but as he worked hard himself and went straight to the point so he expected his visitors and associates to treat him with the same outspoken directness and honesty of word and purpose.

Edward Drummond Libbey

Edward Drummond Libbey was born at Chelsea, Mass., April 17, 1854, the only son of the three children of William Langdon and Julia M. (Miller) Libbey. He is descended from an old English family of which the first representative in this country was John Libbey, who came here in 1634. His father, William L. Libbey (1827-1883), was for many years connected with the glass manufacturing industry, when only 23 years of age, having become confidential clerk to the firm of Jarvis and Commeraise, glass importers and manufacturers, whose factory was located in South Boston. Five years later, in 1855, Mr. Libbey purchased this factory and for the next 10 years conducted its affairs when he engaged exclusively in the manufacture of glassware. He was very successful in this enterprise and built up an extensive trade but in 1870 he accepted the position of general manager of the New England Glass Company of East Cambridge, Mass., and therefore sold his own business. He continued in this position with the New England Glass Company until 1880 when he purchased the entire business, and then took his son into the business as a partner.

The young man was educated in the public schools of Boston and later attended lectures at Boston University. In 1874, when 20 years of age he entered his father's business in which he was given an interest and began his career at the bottom so that he might have a good practical knowledge of every detail of the work. He worked his way up through the various positions and when his father died in 1883 he was perfectly equipped to take over the management of the works as sole proprietor. For several years the business was successfully operated by Mr. Libbey at the old works, but in 1888 the discovery of natural gas at Toledo, Ohio, induced him to move the business to that city, chiefly because of the unlimited supply of cheap fuel afforded the manufacturer by the natural gas. He then incorporated the business as the Libbey Glass Company, of which he became and is now president.

He thus became the pioneer in the glass industry at Toledo, and through able management the business has expanded until, under normal conditions, it employs 1,800 men and, in addition to cut glass, makes bulbs for incandescent lights, supplying the factory of the General Electric Company at Toledo. In the manufacture of cut glass the Libbey Company is recognized as standing at the head for its beautiful and intricate designs. Its exhibits at the Co-



E. D. Libbey

LIBRARY

lumbian Exposition at Chicago in 1893 and at the Louisiana Purchase Exposition at St. Louis in 1904 not only gained many triumphs for the Libbey Company, but also showed the wonderful advance made by the company in its designs, art of cutting, etc., during the interval between 1893 and 1904.

Mr. Libbey has for several years past been largely interested in the manufacture of automatic machinery for making glassware and he introduced into the United States the Owens automatic glass-blowing machine which entirely does away with the old "hand-and-lung" method. In 1894 he organized and became president of the Toledo Glass Company and in 1903 organized the Owens Bottle Machine Company under the laws of Ohio, which secured from the Toledo Glass Company, the original owners, the exclusive right to manufacture machines and machine-made bottles in the United States. The company introduced the bottle machines into the United States and has been remarkably successful. In 1905 he organized and became president of the Owens European Bottle Machine Company which secured from the Toledo Glass Company the European rights to the Owens Bottle machine, which rights in turn have recently been purchased by a syndicate of European bottle manufacturers. Mr. Libbey is also president of the Kent Machine Company of Toledo, the Northwestern Ohio Bottle Company, the Owens West Virginia Bottle Company; is vice-president of the Macbeth-Evans Glass Company of Pittsburg, Pa.; and a director of the Citizens' Safe Deposit and Trust Company of Toledo.

Being himself a lover of art and a collector of paintings of the ancient and modern Dutch, Barbizon, and English schools and of various etchings, prints, etc., Mr. Libbey has also been largely instrumental in stimulating the interest of the Toledo public in works of art. On May 29, 1909, he and his wife, Florence (Scott) Libbey, conveyed seven lots and all the buildings thereon to a board of trustees of which he is president, for the establishment of the Toledo Museum of Art. The site conveyed was the old homestead of Mrs. Libbey's father, Maurice A. Scott, in Scottwood addition to the city, which, according to the terms of the deed, the trustees are to hold for 50 years, on which they are to erect a museum for the advancement and display of works of art, and of which at the end of the 50-year period are to make such disposition as they may deem best. In order to protect the museum from the encroachments of unsightly and undesirable buildings, Mr. Libbey also purchased and presented as an additional gift 100 feet of property on Monroe Street west of the new museum property and extending 400 feet to Grove Place, thus giving a frontage of 500 feet both on Monroe Street and Grove Place. His donations to the cause of art in Toledo aggregate over $150,000. His step-mother, Mrs. Sarah C. Libbey, of Brookline, Mass., presented to the sculpture gallery of the Museum a beautiful cast of the statue of Joan of Arc, by Chapu, the original of which is in the Luxemburg Gallery, Paris.

Mr. Libbey has always been greatly interested in charitable work. He is president of the Toledo Federation of Charities, chairman of the benevolence committee of the Toledo Chamber of Commerce, and a member from Ohio of the National Red Cross Association. He is also a member of the Union League Club of Chicago, the Duquesne Club of Pittsburg, and the Toledo Club of Toledo. He has traveled extensively for the past 25 years. On June 24, 1890, he was married at Toledo, Ohio, to Florence Scott, daughter of Maurice A. Scott and Mary Jane Tallant, and to them was born a son, Langdon, who died in 1894, at the age of 1½ years.

Joseph Rucker Lamar

Joseph Rucker Lamar was born in Georgia, October 14, 1857, a descendant of the famous Southern family of Lamars. "There is a tradition among the Lamars of Georgia," says a biographer of the new justice's famous kinsman and predecessor on the Supreme Bench, Justice L. Q. C. Lamar (who, it may be recalled in passing, before he consecrated his life to the bench, had previously served, like Chief Justice White, in the Senate, like Judges Day and Moody in the Cabinet, and, like the last named, in the House of Representatives), "that their family was of Huguenot origin * * * and fled from France in the celebrated exodus consequent upon the revocation of the Edict of Nantes in 1685." However that may be, their history is as much an integral part of the history of Georgia as is that of the Adamses of Massachusetts, or that of the Bayards of Delaware. The opening years of the last century found Judge L. Q. C. Lamar, 1st, father of the L. Q. C. above, engaged, as was the subject of this article, in its closing year, in revising the statutes of the state; the early Georgia Reports (Dudley's) contain some luminous decisions of his, just as those of nearly 100 years later contain some masterpieces by the subject hereof; and the resolutions of the bar of Baldwin Superior Court upon the occasion of his death contain a description which would quite fit the living judge: "His candor, ingenuousness and modesty were no less conspicuous than his amenity and kindness to all in any way connected with the administration of justice." Mirabeau B. Lamar, his brother, uncle of Supreme Court Justice L. Q. C., emigrated early from Georgia to Texas, led the cavalry charge that broke the Mexican line at the battle of San Jacinto, and later became president of the Republic of Texas. But that is another story. We can but glance back for a moment at the illustrious dead in passing to a nearer study of the living.

Justice Lamar was educated, after the "three R's" period, at the University of Georgia, Bethany College, Bethany, W. Va., and Wash-

ington and Lee University; married in 1880; served in the Georgia Legislature, 1886-89, as commissioner to revise the Code, in 1895, and as associate justice of the supreme court of the state, 1903-5, resigning to resume the practice of law. Add that, except as above indicated, he has been continuously engaged in the practice of law in Augusta, Ga., for the last 30 years or so, and you have the whole story of his objective life.

It was through his service in the legislature that Judge Lamar first became well and favorably known to the people of the state. The Georgia legislature is quite a respectable institution comparatively. The members used to log-roll to elect judges and prosecuting attorneys, but the only evil in that was that it made them a close corporation, so the people put a stop to the system by resuming the delegated power of selecting those functionaries. They also used to take railroad passes before the passing of the pass; but they do not have "jackpots" at the end of the season for division among the faithful; nor do they even waive the constitution "between friends" and with them a man might as well be a coward as to be a crook. In the legislatures of 1886-89 Judge Lamar did yeoman service in bringing Georgia pleading and practice abreast of the times by various reforms or judicial procedure. What is known in Georgia as the Uniform Procedure Act of 1887 consolidated law and equity pleading and put the state in line with the constructive legislation of the age which pays less attention to the "science of statement" and more to the "substance of right." So that when he returned to the practice, Judge Lamar had a circle of friends among the leading men in every county of the state who knew him then as the whole state has since, and the nation will soon, to be a man of conspicuous probity, splendid intellect, and immense capacity for labor.

Six years after Judge Lamar retired from the legislature, the time rolled around for the periodical revision of the state laws which occurs in Georgia every 10 or 15 years. The suggestion of his name as one of the commissioners to revise the code was received with very general satisfaction, and along with two older and (then) more distinguished lawyers, he was appointed by the governor a member of the code commission in 1895. Justice Lamar's appointment by J. M. Terrell (who is now United States Senator from Georgia) to the supreme court of the state in 1903, was, of course, received with that general approval which naturally follows the appointment of such a man, and his subsequent service in that court has added materially to the unquestionably high standing it already had with the bar of the country.

He resigned in 1905 and resumed the practice of law in Augusta, where he probably would be still if the midwinter charms of that lovely Southern city had not attracted the presence of the President, who met him there and conceived for him the same high respect and regard that has long been entertained by the people of Georgia, as well as by other distinguished visitors from the North who have happened to discover him on his native heath. This subsequently resulted in the appointment of Judge Lamar as an associate justice of the Supreme Court of the United States, he taking his seat as a member of that body January 3, 1911.

An incident which occurred in 1902, before he went on the supreme court of the state, is well worthy at this juncture of the serious consideration of thoughtful men. Mr. Lamar had accepted an invitation to deliver the memorial address over the graves of the Confederate dead at Athens, Ga. He took no press agent along, being exceptionally free from the habit, but he made it an occasion for talking in neighborly fashion to his own people about the race question, and how the dead, if they could only come back, would have us handle it. An educational conference happened to be on in Athens at the time, and a number of prominent Northern men, Mr. George Peabody, Dr. Albert Shaw, and others who were there to attend it, went to hear the speech. So impressed were they that they afterward asked the speaker's permission to reproduce it on their return to the North for general distribution. Let Dr. Shaw tell some of their impressions in his own words as he does in the preface to the pamphlet reproducing the speech:

> "The speaker was a man who bears a name distinguished in the annals of the South and of the nation. * * * He views the race question seriously, but without pessimism, and in the true perspective * * * and he touches the very root of remedial policy when he points out the duty of the South to improve the status of the negro race on the agricultural and industrial side as preliminary to the ultimate success of universal education and effective school training."

Said Judge Lamar, among other things, in this address: "The time must come—I think it is rapidly coming—when we shall receive the sympathy of the entire nation in our effort to deal with this issue. * * * He [the negro] can only be elevated by education—not the mere education of books, but the education that comes from contact with the superior mind." And farther on in the speech he adjures the white landowner of the South, by the sacred memory of the dead and his duty to himself and his family, that he is "bound to assist his tenant with instructions and kindly advice; bound to see that the land which he received as an inheritance from his father shall be transmitted as a heritage of equal value to his children, * * * the tenant improving his own condition and that of the land." The keynote is intensive farming and industrial education, for the mutual benefit of both races and the uplift of the weaker. "Here," said he, "is a homely solution of the race problem. * * * It will elevate the negro and multiply the resources of the land. It will tend to wipe out the stain of illiteracy," etc. Says Dr. Shaw, in concluding his foreword to the Northern reprint: "To approach our great problems of American life and society, whether Northern or Southern, Eastern or Western, urban or rural, in the light of patriotic duty and in the broad-minded spirit of this address of Mr. Lamar's is to do our share towards the fulfilment of a true national destiny."

Since that time the Northern millionaire philanthropists and statesmen have been more and more directing their endeavors for the uplift of the negro in the South along the broad lines of Judge Lamar's speech.

ASTOR

Mengo L. Morgenthau

Mengo Lazarus Morgenthau

Mengo Lazarus Morgenthau was born at Mannheim, in the Grand Duchy of Baden, Germany, May 5, 1860, one of the 14 children of Lazarus Morgenthau and Babette Guggenheimer. His father, while a prosperous cigar manufacturer in his home town, decided that the United States offered greater opportunities for his growing children, and accordingly, in June, 1866, settled in New York City.

Mengo had spent some time in the kindergarten in Mannheim, and his education was continued in this country in private schools and in Grammar School No. 14, from which he graduated in 1874. Entering the College of the City of New York he attended for some time, in 1875 starting upon his business career as a stock clerk in a shirt manufacturing house. The confinement of this position became irksome to the young man and he went to Ohio, to engage in farming. His intelligence and industry, however, could not adapt the mentally active, city-bred lad to farm life. He became a school-teacher, and, for some time, taught in the little district school near Wauseon in the northwestern part of Ohio. His salary was small, but his opportunities for observation were many and varied. The experience was of much value in greatly broadening his knowledge of the world, and especially in developing a quick insight into the character and capabilities of others.

His career as a school teacher was not of long duration. The call of the city brought him back to New York, where he found employment as buyer in a dry goods and notion house. In 1881, however, failing health compelled him to give up business. After a rest of six months in Europe, he returned to New York and entered the employ of the Kurscheedt Manufacturing Company, remaining with them until 1883, when he went to St. Gall, Switzerland, to superintend the manufacture of embroidery for a New York firm.

In 1886 Mr. Morgenthau again returned to this country and became a buyer for the firm of Morgenthau, Bouland and Company of Chicago, of which two of his brothers were members. This firm conducted two stores, known as the Bee Hive and the Columbus, and Mr. Morgenthau was so successful that in 1890 he became a member of the firm. After six years of arduous and successful labor in behalf of the interests of this house his activities took him to another field, which was destined to be his life work.

Occasion led him to an investigation of the candy business. And, typical of the man, it was thorough. The wide knowledge he had acquired of business and men, and his keen insight, discovered to him the vitally weak points as well as the requirements of improvement. He found a market overwell supplied with cheap candy, made under the poorest conditions, of material both unwholesome and unhealthy. The opportunities of obtaining pure and high quality candies were very limited, and then only at prices prohibitive to many.

The natural abilities of Mr. Morgenthau fitted him remarkably to grapple with a situation of this kind. For the candy business, perhaps more than any other, is one of immense detail. He determined upon a plan of candy production and retailing which should set up a standard of candy quality that could be absolutely guaranteed as to purity and wholesomeness of material, and manufactured under conditions of scrupulous cleanliness; to distribute his candies only through stores which he himself controlled, and finally, to sell at prices which, while eminently just, would place such candies within reach of everyone.

It was a big undertaking but a splendid conception. Its high motive of public welfare commended it to great success.

On October 15, 1896, the plan was put in operation. The first «Mirror» candy store was opened at 268 Sixth Avenue. Success was immediate. In 1907 the business was incorporated, with Mr. Morgenthau as president.

From that one store the business has grown to nine stores in the choicest business locations in New York City, and the company is now preparing to move into a new factory building being erected for it by the Trinity Corporation on a plot 125x125 feet, 8 stories in height—merely to supply the immense bulk of candies retailed through the Mirror stores. For in this, as in every other respect, Mr. Morgenthau has adhered earnestly to his original plan to sell his candy only in stores under his own control, thus preventing the possibility of substitution of inferior goods.

To relate the methods of the Mirror business is to describe Mr. Morgenthau; the two are interchangeable terms. In all directions, in every department, is seen the impress of his personality, and in no greater degree anywhere than in the stores themselves. Their strong originality reveals the comprehensive ingenuity of their sponsor, and suggests an adequate reason for unqualified success. Honest value he has made a law; sanitation and cleanliness a religion; courtesy a part of the purchase. A comfortable sense of wholesomeness and good eating is silently conveyed in numberless ways. The great individuality displayed in dressing the Mirror stores has been the subject of wide comment. So radical was the departure from ways previously known, and so attractive, that this feature is recognized throughout the trade as a valuable business asset—and copied in all parts of the country. The complete distinctiveness of the methods in their entirety is so emphatic, that they contain all the elements of an invention, though unpatentable, and are as much a trade-mark of the business as its unique name.

It is to be expected that Mr. Morgenthau is a man of very marked characteristics. He is an intensive type, mentally and physically. No one of his employees is more active, works harder or longer than he. Originality, persistence, and an infinite capacity for detail are very prominent traits of his makeup. Thoroughness is seen at every turn, and his undeviating in-

sistence on fair-dealing is known to all who do business with him, or in the Mirror stores.

It is indicative of the man's method that Mr. Morgenthau will not, for hygienic and commonsense reasons permit the return or exchange of candies once sold and taken from Mirror stores. A guarantee goes with every purchase that the candy is fresh, clean and wholesome, and this guarantee could not be conscientiously given if the candies had once passed into the possession of others. If, under very exceptional circumstances, any candies are permitted to be returned, there is a standing order that they must be immediately destroyed. Fresh candies are doubly assured to the public by the fact that only the limit of factory production can keep pace with the demand.

Probably no greater evidence could be given of how accurately Mr. Morgenthau gauged the public attitude towards a high standard of candy than that, in a business as extensive as the Mirror stores, the rule is, strictly cash. Charge accounts are unknown. This is the more remarkable when it is remembered that the stores include in their patronage a large majority of the wealthy and exclusive classes, whose habit is «Charge!»

Like unto Mr. Morgenthau also is his explanation of the name «Mirror.» Not only is each store lined with mirrors for their pleasing effect and cleanly appearance, but the name also typifies a policy. It is, in short, a paraphase of the well-worn wisdom of «Bobby» Burns, «Oh wad some power the giftie gie us, to see oursel's as others see us.» The reasoning is apparent. By striving to see the other man's viewpoint mistakes are avoided and successful service made certain.

Mr. Morgenthau has expended much money for advertising, but in this, as in other respects, his method is original and away from the ordinary. Hundreds of thousands of sample boxes of candies have been distributed from time to time to acquaint the public with «Mirror» candies. Another of his methods is to offer each week, at each store, some regular line of candy at a material concession in price—to advertise them. And the small metal souvenirs which are daily given to purchasers are irrevocably identified with the «Mirror» stores. Millions of these souvenirs are distributed yearly.

That Mr. Morgenthau has done much to advance the public health and welfare, in establishing his standard of candy purity, is freely conceded—and by none more readily than by the progressive members of the medical profession. Appreciating the boon to their patients of his efforts, they designate «Mirror» candies in their practice, because of great purity.

Great success was the logical attendant of Mr. Morgenthau's planning, if there be any merit in the theory of high resolve earnestly prosecuted; though he feels that beyond and above the gratification of financial success is the pride of accomplishment. To him, his organization stands first as the realization of an ideal, and second, as the concrete proof that it is profitable to have ideals and hold steadfastly to them.

Notwithstanding the great strain upon his vitality which the activities of business entail upon him, Mr. Morgenthau has found time and great pleasure in giving thought and support to the intellectual side of life and its various economic and social problems. He is a member of the Society for Ethical Culture, the Society for Psychical Research, the American Economic Association, the Economic Club of New York, and over 50 charitable organizations, most of which are non-sectarian. He is also a member of the Merchants' Association of New York, the National Association of Manufacturers, and of the National Confectioners' Association. His principal recreation is amateur photography. On April 8, 1891, he was married at Chicago, Ill., to Miss Belle Mayer, daughter of Nathan Mayer, and Henriette Liebenstein. They have two daughters: Agnes Josephine (b. March 20, 1892), and Louise Henrietta (b. January 12, 1896).

Robert Forster Whitmer

Robert Forster Whitmer was born at Hartleton, Union County, Pa., January 25, 1864, the son of William Whitmer, a prominent merchant of Pennsylvania, and Katherine A. Forster, his wife. On the maternal side he is descended from a line of patriots who have fought many battles for the preservation of the country. His mother was a descendant of Scotch-Irish immigrants who settled in Northumberland and Union counties in 1700 and bore the brunt of the hardships in the border warfare of the early colonial times in Pennsylvania. Her father's father, Robert Forster, fought during the Revolutionary War, with the rank of colonel, and one of his uncles fought on the British side in the French and Indian wars.

Robert F. Whitmer secured his early education in the public schools of Union and Northumberland counties, his family having moved to Sunbury in 1872. Being an apt scholar he soon qualified himself to enter Pennsylvania State College, but after studying at this institution for a period of two years he left it to enter Lafayette College at Easton, Pa., whence he was graduated A. B. in 1885. His father was engaged in the lumber business at Sunbury as senior partner in the firm of Whitmer and Company and the young man entered the office directly from college, taking the position of manager. He quickly mastered the details connected with the business and handled the affairs of his position with such

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ability that he became almost indispensable to the firm, taking the greatest share of its responsibilities upon his shoulders.

In 1889 Whitmer removed to Philadelphia and six years later was made vice-president of the firm of William Whitmer and Sons, Incorporated. In October, 1896, his father died and Robert succeeded him as president of the above company and in the various positions he occupied in other corporations that he had founded. Besides being president of the above company, he is president of the Parsons Pulp and Lumber Company of Philadelphia, of William Whitmer and Sons Company of Sunbury, the Champion Lumber Company and of the Dry Forks Railroad, a road projected and constructed by him and running through a highly productive lumbering and mining section of West Virginia. In his management of all the diversified interests with which he is connected Mr. Whitmer has exhibited rare conservatism, but he has never allowed his conservatism either to prevent the adoption of new methods that would improve upon or perfect the old or to hinder him from embarking into new enterprises that he thought would bring in sufficient returns to warrant the original outlay.

Mr. Whitmer is a member of the Union League, Racquet, and Philadelphia Country clubs, the Pennsylvania Sons of the Revolution and St. Andrews Society. In April, 1891, he was married to Mary Packer of Sunbury, Pa., and to them have been born five children: Martha C., Katharine F., Robert F., Rachel P., and Ellen Isabel.

John Alexander Topping

John Alexander Topping was born at St. Clairsville, Ohio, June 10, 1860, the son of Henry and Mary (Tallman) Topping. He is descended from a family well known in the state of Ohio, and for generations his folks have been prominent in financial, industrial and professional life. James Tallman, one of his maternal ancestors, was an iron manufacturer in colonial times and for conspicuous services rendered during the Revolution was granted a tract of land in Ohio. His maternal grandfather, John C. Tallman, was one of the founders of the First National Bank at Bridgeport, Ohio. Mr. Topping's father, Henry Topping, was a civil engineer and throughout the Civil War served on the staff of General William S. Rosecrans. At the end of the war he made Kansas City, Mo., his home and there engaged in the practice of law. It was there that his son John A. Topping, although born in Ohio, was reared and educated.

Upon his graduation from the public schools of Kansas City young Topping entered the high school, but soon afterward returned to Ohio, and in 1876, at the age of 17 years, entered upon a business career as a clerk in the First National Bank at Bellaire, which had been established by his uncle, A. P. Tallman. The banking business did not, however, suit the energetic nature of the young man and in the following year he resigned his position in the bank to enter the iron business. He first became pay roll clerk in the employ of the Aetna Iron and Nail Company at Bridgeport, a concern also founded by the Tallmans, and continued with that company for 23 years, working through every department of the business until in 1899 he became president. He continued in this position for only a year, however, as in 1900 the National Steel Company, the American Sheet Steel Company, the American Tin Plate Company and the American Steel Hoop Company were consolidated and later with others merged into the United States Steel Corporation.

In the spring of 1900 when the American Sheet Steel Company was organized Mr. Topping was elected first vice-president of the company and continued to occupy that position until July, 1903, when he resigned to accept the presidency of the La Belle Iron Works, of Wheeling, West Virginia, one of the largest of the independent companies of the middle West, representing an investment of about $10,000,000. In 1903 this company had become embarrassed for lack of funds and it was not only necessary to reorganize it but also to refinance it. Mr. Topping successfully accomplished this work and placed the entire business upon a profitable basis so that at the end of the year he was able to turn over the property in excellent condition to a permanent organization which had been effected to carry on the business. In the spring of 1904 the American Sheet Steel Company and the American Tin Plate Company were consolidated into the American Sheet and Tin Plate Company and in July of that year Mr. Topping was elected president of the new corporation.

He held this office until the early part of 1906 when he resigned to accept the presidency of the Republic Iron and Steel Company, the control of which company had been purchased by a group of capitalists represented by Messrs. L. C. Hanna, G. B. Schley, E. W. Oglebay, J. W. Gates, J. B. Duke and others. This same syndicate shortly thereafter acquired control of the Tennessee Coal, Iron and Railroad Company. Mr. Bacon, the head of the company, was an expert in mining but not in the manufacture of steel and it was deemed a necessity to have a steel expert at the head of the company. Mr. Topping, now having become one of the leading iron and steel men of the middle West, was then invited to become chairman of the executive committee of the Tennessee Company—a position comprising all the activities of president. He accepted the offer and in March, 1906, succeeded Mr. Bacon as executive head of the company. Mr. Topping now en-

tered the southern field for the first time, and within less than two years, so definitely planned was his campaign and so well ordered and aggressively executed was it, he had built up a thoroughly harmonious and competent organization and had expended more than $7,000,000 for new factory extensions and for the rehabilitation of the old properties, the work of improvement going on without interrupting the mines, mills or furnaces, while at the same time earnings were increased and dividends paid.

When he began his work of upbuilding the business of the company Mr. Topping had ample funds to back his plans, a new organization, fresh impulses and new business methods, which, combined with his own enormous capacity for hard and efficient work, soon wrought a change in the affairs of the company. His plans for the development and expansion of the Birmingham district were stupendous. The Ensley Mills at Birmingham, instead of being the prop and mainstay of the whole company, were its weakest point, and consumed, instead of adding to, the company's resources. Mr. Topping therefore planned to reconstruct the whole plant in the Birmingham district. In speaking of this work he said: «We've planned a good deal ahead, for we're in for development work on a big scale. And it will take money and time, and, above all, a good man on the ground at the lead. No matter how brilliant a technical or mechanical genius a fellow is, nor how extraordinary his degree of culture and mental ability, if he hasn't got just plain, ordinary common sense and a level head he can't make good. The right man must be gotten for the right place.»

Mr. Topping now looked about him for the «right man» to personally supervise the reconstruction of the Ensley works and soon had succeeded in securing the services of Frank H. Crockard. In July, 1906, Mr. Crockard was elected a member of the executive board with the title of vice-president and general manager of the Tennessee Company and manager of the southern district of the Republic Iron and Steel Company. Crockard threw himself enthusiastically into the work of successfully consummating Mr. Topping's great plans and the two worked hand in hand for the next two years. Being now in control of both the operating and commercial divisions Crockard began the reconstruction of the entire Ensley division, building a new open-hearth steel plant, a new rail mill, new skip-filled blast furnaces, ore bins, boiler plant, and lime plant, and also adding additional railroad facilities and other coal and iron mines. The new duplex plant was constructed in record-breaking time and has proved a complete success, for in connection with the associated Bessemer plant it produces a tonnage greater than any other plant in the world operating an equal number of furnaces. The erection of these mills gave the company the distinction of being the first manufacturer of open-hearth steel rails in the South employing modern equipment. While the pioneer work of demonstrating that open-hearth rail could be manufactured from ores obtained in the South had already been done under a previous management, it remained for Mr. Topping to introduce modern and scientific methods.

The broad and comprehensive plans of development of the Tennessee Coal, Iron and Railroad Company property mapped out under Mr. Topping's administration were substantially completed, yet some of the important work undertaken was interrupted by the panic of 1907-8. As a result of financial complications affecting some members of the syndicate, a sale of the control of the property was made to the United States Steel Corporation, and following the transfer of ownership, Mr. Topping resigned the chairmanship in order that the new owners might appoint their own representative as the executive head of the company, George G. Crawford being appointed president of the company on November 20, 1907. That the work of organization and construction was well planned and thoroughly carried out by the Topping administration was evidenced by the fact that no organization changes below the head of the company were made; Mr. Crockard and his associates continued with the reorganized company to carry to completion the original plans which were fully approved by the new owners.

Since that time Mr. Topping has devoted himself to furthering the interests of the Republic Iron and Steel Company (which is entirely independent of the United States Steel Corporation) in the capacity of chairman and member of the executive committee. Mr. Topping has recently been well portrayed by the historian of the coal and iron industry in Alabama: «Conservative, reserved, a man of real culture, good sense, and diplomacy, Mr. Topping is in the personal way, as in the mental, fine and clear cut, essentially the officer and the gentleman. * * * He is philosophic as well as practical.»

Mr. Topping is a member of the Sons of the Revolution, the Duquesne Club of Pittsburg, the Union League and New York Athletic clubs of New York, the Greenwich Country Club of Greenwich, Conn., and the Triton Game and Fish Club of Quebec, Canada. On January 18, 1883, he was married at Bridgeport, Ohio, to Miss Minnie C. Junkins, daughter of S. A. Junkins, a well-known Ohio merchant, and to them have been born two children: Wilbur B. (b. 1885) and Henry J. (b. 1886).

Jno A Topping

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Andrew S. Upson

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Andrew Seth Upson

Andrew Seth Upson was born at Burlington, Hartford County, Conn., June 16, 1835, and died April 2, 1911. He was one of the seven children of Seth Upson, a prosperous farmer, and Martha (Brooks) Upson, and was descended from an old English family, the pioneer of which in this country was Thomas Upson, who established himself about 1637 at Farmington, Conn., and whose name appears as one of the first property holders of that place.

Andrew Upson was educated in the public schools of his home town and later supplemented this elementary schooling by a course in a private school. During the summer months he was occupied in farm work and thus laid the foundation by which in later years he was enabled to work so incessantly and industriously without apparent fatigue. When 18 years of age he entered the employ of his brother-in-law, Dwight Langdon, who operated a manufacturing establishment at Farmington (Unionville) Conn. For the next two years he occupied subordinate positions but at the age of 20 became a traveling salesman for the company.

In 1860, upon the death of Mr. Langdon, Mr. Upson came into possession of the business and soon afterward formed a partnership with a Mr. Dunham, under the name of Upson and Dunham, for the purpose of manufacturing bolts and nuts. Subsequently, in 1866, the firm was incorporated as the Union Nut Company, but in 1883 the name was again changed to the Upson Nut Company and a special charter granted the company by the legislature. Of this company Mr. Upson was the president from its organization and to his executive ability and keen business judgment may be attributed the greater part of its success. When the company was first organized the employees numbered about 25, but to-day, to such remarkable proportions has the business expanded, there are nearly 1,200 employees. In 1872 the business outgrew the old factory at Farmington and a new branch factory was erected at Cleveland, Ohio, to care for the western trade. The products of the company reach South America, Europe and Australia.

Mr. Upson was also connected with many other large enterprises, having been president of the Union Rolling Mill Company, vice-president of the State Banking and Trust Company, director of the Union National Bank, the Central National Bank, the Western Reserve Insurance Company, the Bankers' Surety Company, and the Land Title Abstract Company, and a member of the advisory committee of the Citizens Savings and Trust Company.

While the greater part of Mr. Upson's time was occupied by the cares of his diverse business interests, he was always ready to contribute his share in conducting the affairs of his home city, state and nation. He did not seek political offices but they came to him unsolicited. He was a life-long Republican, and always endeavored to advance the interests of his party. He was for many years a tax assessor and a member of the board of tax revision in Farmington. He served two terms (1871, 1872) in the lower house of the Connecticut state legislature, and two terms (1880, 1882) in the state senate, being elected from a senate district that was normally Democratic by more than 1,000 majority. He was also a member of the Republican national convention of 1880 that nominated James A. Garfield for the Presidency. During his entire legislative career he displayed remarkably fine judgment in his advocacy of measures affecting the welfare of the state, laying aside all party politics and considering only the benefits and advantages to be conferred on his constituents, the people of Connecticut. He therefore gained an enviable reputation for wisdom in council, uprightness of character and safety in leadership.

Mr. Upson had traveled extensively in Europe, the Mediterranean, Egypt, Argentina, Chile, Panama, Mexico, Cuba and the United States. He was a member of the Union, Colonial and Euclid clubs of Cleveland, a trustee of the Plymouth Congregational Church of Cleveland and a member of the Unionville Congregational Church of Unionville, Conn. He maintained a beautiful residence at Farmington, but after 1889 spent the greater part of his time in Cleveland, Ohio, where his most important business interests were and where he had an elegant home on Euclid Avenue. On October 2, 1859, he was married at Unionville (Farmington) Conn., to Miss Chloe Moses, daughter of Orrin Moses, of Burlington, and they had six children: Dennis A. (b. July 14, 1861); Willis (b. May 6, 1864; d. February 6, 1869); Burton (b. October 2, 1865; d. August 24, 1880); Luther Moses (b. December 7, 1868; d. May 26, 1897); Mary (b. July 12, 1870); and William Jewell (b. December 30, 1877).

John McFarlane Phillips

John McFarlane Phillips was born at Pittsburgh, Pa., February 5, 1861, one of the five children of James Phillips, a prominent contractor of that city, and his wife, Anna P. Phillips. On the paternal side, he is descended from an old Scotch-Irish family, the first member of which to emigrate to this country was his grandfather, James Phillips, who settled here in 1795. On his mother's side he is of English extraction, his mother's father, Watson Provost, having come from England early in the 19th century.

Mr. Phillips received a public school education, and then attended the Pittsburg High School. After graduating from the latter institution, he was convinced that the natural bent of his genius lay in the direction of mechanical engineering and he was fortunate in receiving instruction in this line from some of the most practical engineers of the steel city.

When still a boy Mr. Phillips entered the employ of the Lewis, Oliver and Phillips Company, a leading iron and manufacturing company of Pittsburgh, which had been established in 1863. Intelligent application to his duties, and unstinted labor in behalf of his employers' interests soon won him promotion, and step by step he advanced until he became superintendent of the department devoted to mine and mill supplies. This department was the pioneer in this line. In this capacity he remained with the Oliver Company, now known as the Oliver Iron and Steel Company, until 1889, at which time he and his uncle, John Phillips, who was vice-president of the Oliver Company, purchased from the company its entire rights in the mine and mill supply department. The nephew and uncle then founded the Phillips Mine and Mill Supply Company. Mr. Phillips succeeded his uncle, who retired at the age of 78, as president of this company in 1900, and still continues to hold this position.

From the very outset the business prospered, and during its entire career of more than 20 years its plant has witnessed no shut-down from any cause. The plant of the Phillips Company at South 23d Street, Pittsburg, covers an area equal to two city blocks, and is well equipped with the most improved types of machinery. By following a perfectly rational policy and meeting his employees in a spirit calculated to satisfy the most exacting, Mr. Phillips has disarmed all thought of those disturbances which have sapped the vitality of so many of our industrial organizations, and has welded together a large force of men into one vast machine-like body, which operates with exactitude, promptness and efficiency.

Mr. Phillips has associated with him a very efficient force of assistants; his brother, Watson P. Phillips, born in 1863, who also served his apprenticeship with the Oliver Company, and later fitted himself more thoroughly as a practical engineer by traveling throughout the South, including Mexico and the western states, is vice-president of the company, and ably assists in looking after the workmen and the general management. J. E. Roth, secretary and treasurer, looks after the financial welfare of the Phillips Company. He was born in 1868 at Pittsburg, and is also president of the German Savings and Deposit Bank, one of the oldest banking institutions in the city of Pittsburg. He is also president of the South Side Hospital of Pittsburg, one of the finest hospitals in the United States. This hospital is a hobby of Mr. Roth's, who devotes whatever spare time he may have to its improvement. Robert F. Phillips, born at Pittsburg in 1868, is manager of the foundry department, and has perfected himself so ably in foundry practice that this company is noted for the superior quality of metal castings used throughout its work. The name Phillips on a wheel is like the Hall-Mark on English silver. John P. Chessrown, born at Pittsburg in 1872, fills the position of auditor very creditably, and has never been engaged anywhere except with the Phillips Company. The Phillips Mine and Mill Supply Company is a corporation, and its stock is held exclusively by the above-mentioned officers.

In addition to his work in directing the large organization of which he is the head, Mr. Phillips has devoted considerable time and thought to originating new mechanical devices, and improving and perfecting old devices for saving labor. His inventive ability has been turned chiefly to devices for handling coal cheaply, and the most noteworthy result of his labors is seen in the Phillips Patent Automatic Cross-Over Car Dump, which is now in use wherever coal is mined, and of which a sufficiently large number have been installed to dump the entire coal output of the world. While this is probably the most widely known of the devices patented by Mr. Phillips, in conjunction with John J. Fleming, chief engineer of the Phillips Company, and his brother, Robert F. Phillips, he has originated and patented many others which in their particular fields are of equal importance.

Mr. Phillips has traveled extensively over the United States, Canada, Mexico, and South America, chiefly for the purpose of hunting and photographing big game, which constitute his principal recreations. With Dr. William T. Hornaday, he collaborated in the publication of "Campfires in the Canadian Rockies," a book which has gone through several editions, and for which the photographs were especially taken by Mr. Phillips. The book was prepared with a most useful object in view, and its publication was a potent factor in the agitation which caused the Canadian government to set aside for the preservation of its big game animals a large section of territory between the Elk and Bull Rivers, now known as Goat Mountain Park. Thus the animals have an excellent tract of land for their exclusive use, secured to them chiefly through the instrumentality of Messrs. Phillips and Hornaday.

In his home Mr. Phillips has a large and valuable collection of photographs, taken by

himself, of big game in its natural haunts, and many excellent specimens of the heads of these animals. He also presented a collection of animals, grizzly bear, jaguars, mountain sheep, mountain goats, etc., to the Carnegie Museum of Pittsburg.

Mr. Phillips is one of the three honorary members of the Campfire Club of America, the others being ex-President Roosevelt and Representative John F. Lacey of Iowa, sponsor of the Game Law passed by Congress May 25, 1900, known as the Lacey Act. He is also a director in the South Side Hospital, a member of the Duquesne Club, is a 32° Mason, and a Knight Templar. He is also one of the members of the Board of Game Commissioners of the state of Pennsylvania, a director of the American Bison Society, also a member of the Engineer's Society of Western Pennsylvania, and is president of the Lewis and Clark Club of Pittsburg, composed of big game hunters.

In February, 1906, he was married at Pittsburg to Harriet T. Duff, daughter of John Milton Duff, M. D., and Jennie Kirk Duff, and they have three children: Anna Jane, Mary Templeton and Margaret Watson Phillips.

Henry Latham Doherty

Henry Latham Doherty was born at Columbus, Ohio, May 15, 1870, one of the three children of Frank Doherty and Anna McIlvain. The Doherty family was founded in this country by William Doherty who came here in 1797, and many of its members have been prominent in the affairs of Ohio, William Doherty early becoming an adjutant-general of the state. John McIlvain the maternal grandparent of the subject of this sketch distinguished himself for bravery in repelling an attack by the British on Fort Niagara in 1814 and was brevetted for bravery and later was the second state librarian of the state of Ohio.

Henry L. Doherty received his education in the public schools of Columbus, which he attended from 1876 to 1882, but in the latter year he left school to engage in business. His first position was that of office boy in the employ of the gas company in his native town and for the next 14 years he remained in the service of the company, being rapidly advanced in position because of his application to his duties, his aptness in mastering the problems continually arising and his ability to produce results. His father had been an able engineer and inventor, and the son inherited a large share of his genius in this field, but in order to better fit himself for his life's work he utilized every spare moment to extend and broaden his general education and improve his technical knowledge. His labors were soon rewarded, for in 1896, when only 26 years of age, he was called to Madison, Wis., as manager of the Madison Gas and Electric Company. This was the beginning of a brilliant career and since that time Mr. Doherty has been prominently identified, either as manager, president, vice-president, or director, with more than 35 well-known lighting companies throughout the country. In 1905 he founded and at the present time is the senior member of the firm of Henry L. Doherty and Company of 60 Wall Street, New York, owners and operators of gas and electric properties.

Probably the chief factors contributing to Mr. Doherty's rapid advancement have been his initiative in inventing new appliances and making pronounced changes in old ones, and his unique and interesting methods of placing these improvements before the public. But the most praiseworthy feature of his work, for which the highest meed of credit and honor should be accorded him, is the fact that these inventions and improvements have been made and given to the public purely for the benefit of mankind and not because they possessed merit from the commercial viewpoint. Mr. Doherty has worked from the standpoint of achievement, and apparently cares little about fame, power or money, his principal desire being to improve the means of social comfort and convenience without regard to pecuniary gain to himself. He believes that the public should be given the benefit of every improvement merely because it in itself is a good thing, without consideration as to whether profit or loss results from such action. His most noteworthy achievements are: The invention and application of the «Readiness-to-Serve» method of charging for electric service, which he outlined in 1900 in a paper on 'Equitable Competitive and Uniform Rates'; the invention of the displacement gas calorimeter; the invention of the process of burning all kinds of fuel in high temperature furnaces without clinkering; the invention of the Doherty cooling tower which permits steam engines or turbines to be non-condensing where water is not available for condensation purposes; the manufacture of gas specially free from hydrogen for gas engine use; the development of three wire alternating current distribution; the invention of making and revivifying iron oxide for purifying gas from sulphur; etc. In 1899 he advocated the abolition of purifying houses, claiming that the purifiers should be out of doors and this practice has since been widely adopted. In the early days of Welsbach gas lighting he inaugurated a greatly improved system for the maintenance of lamps, inventing devices for handling, washing, drying and cleaning the glassware and brass work, for carrying glass chimneys, for blowing dust from the check plates of the bunsen tubes, and for controlling lamps from a distance. He is also to be credited with improvements on gas meters, gas benches, purification boxes, bench fuel, arc lamps, etc.

In addition to improving the mechanical features of various gas and electric appliances,

Mr. Doherty has contributed much to commercial economics by creating new ideas in the methods of conducting and developing the business of lighting companies. He originated the organization plan which has been used with such complete success by the National Electric Light Association; he extended Thompson's law to the determination of business problems; he created a method of accounting which would permit the determination of fixed and variable expenses; and has devised a plan in engineering practice whereby «initial» and «additional» costs might be determined. Before he left the service of the Columbus Gas Company he had suggested many improvements which were adopted by manufacturers and was largely instrumental in securing the adoption of the Welsbach gas lamp as a means of lighting in preference to electric lights. When he entered the service of the Madison Gas and Electric Company he immediately instituted a new method of conducting its business, the principal features of which were extensive advertising; the formation of clubs, including the Housekeepers' League which secured the largest membership of any non-secret organization in Wisconsin; the establishment of cooking schools; and the consummation of an arrangement with the Board of Education, whereby gas cooking might be taught in the public schools. Many of Mr. Doherty's innovations when first inaugurated were considered daring, extravagant and of too radical a nature to be adopted, but the results proved the soundness of his theories and his methods are now followed almost universally by gas and electric corporations. In a comparatively short period of time he has accomplished the work of years by older methods and yet has increased net earnings and rates of dividends in a manner that has been the astonishment of those who have had years of experience in this industry.

Withal his activities in connection with developing the economic and mechanical phases of the sciences, Mr. Doherty has devoted much time and energy to the advancement of the theoretical side. He is a member of the American Association for the Advancement of Science, the American Academy of Political and Social Sciences, the New York Academy of Sciences, the American Institute of Electrical Engineers, the American Society of Mechanical Engineers, the American Society for the Promotion of Engineering Education, the American Society of Heating and Ventilating Engineers, the Society of Illuminating Engineers, the National Electric Light Association, the American Gas Institute, The American Gas Engineers, the Wisconsin Gas Association, the Pacific Coast Gas Association, the Canadian Electrical Association, etc. In 1896 he aided in organizing the Columbus Engineers' Club and in the same year entered the Northwestern Electrical Association, becoming president of the latter in 1899, when, because of his organizing ability and untiring labor in its behalf, it became the largest electrical association in the country. In 1897 he became a member of the National Electric Light Association and to a great degree has been responsible for the modifications in its organization which have wrought such a remarkable change for the better. In 1901 he was elected president of this association and in 1907 acted as a committee of one on «Organization Possibilities,» securing the adoption by the association of his plan for creating company and geographical sections. In 1899 he proposed that the association investigate the subject of arc lamp photometry and he was chairman of the special committee appointed for that purpose, the committee subsequently rendering four annual reports which are recognized as the most exhaustive and authoritative ever presented on this subject. In 1901 he also inaugurated the «Question Box» for this association and the «Department of Progress» of which he appointed T. C. Martin editor. In 1898 he was awarded the first Beall gold medal by the American Gas Light Association for his paper on 'Gas for Fuel.' In 1902 he was appointed a member of the organization board of the World's Congress of Electricity held at the Louisiana Purchase Exposition at St. Louis in 1904, and at this exposition he read a paper on organization plans before the gas congress which started the movement resulting in the establishment of the American Gas Institute of which he was vice-president in 1906. In 1901 he was president of the Ohio Gas Light Association, one of the associations composing this institute, and in 1905 was a member of the council of the American Gas Association. Into the spirit and work of these associations Mr. Doherty has thrown himself with enthusiasm and energy, and undoubtedly a great measure of their success is due to his unstinted labors in their interests. His affability, optimism, and solicitude for the welfare of others combined with an active brain that works along distinctive original lines, and an insatiable appetite for work, have produced a charming and powerful personality, have brought success to his enterprises and have naturally made him a leader in accomplishing difficult tasks, in solving intricate economic problems, and in successfully launching new ideas that revolutionize older methods.

Mr. Doherty has traveled extensively in the United States, Canada and Europe. He enjoys the pleasures of club life and is a member of the Lotos, Lawyers', and Democratic Clubs of New York; the Denver Club of Denver, Colo.; the Minnesota Club of St. Paul, Minn.; the Commercial Club of Lincoln, Neb.; and the Columbus Club of Columbus, Ohio. He is interested in sports of every nature and is particularly fond of fishing, though he has little time in which to indulge in this recreation. He has always been a collector of rare precious stones, and at first started to gather American stones only, but he subsequently decided to secure specimens from all countries and now has a superb collection numbering about 5,000.

Henry L. Doherty

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Frank Crawford Letts

Frank Crawford Letts was born at Magnolia, Illinois, April 28, 1861, on the paternal side being of English extraction while his mother's antecedents were Scotch-Irish. He is one of the five children (three sons and two daughters) of Noah Hiram and Herma (Cowan) Letts and through his grandfather David, and his wife Elizabeth (Dunnavan) Letts, is descended from Nehemiah Letts, who came to this country from England in 1771, established himself at first in New Jersey and thence moved to Ohio.

His father was a prosperous merchant and farmer of Letts, Iowa, and upon his farm the young man's early days were spent, becoming inured to the hard but healthy toil of farming life, and developing a strong, sturdy constitution, and a robust health which enabled him in later years to astound his associates by the enormous mass of business of which he could dispose within a single day. His early educational training was obtained in the public schools of Letts and Afton, Iowa, and Wenona, Illinois, and when 14 years of age, being of an ambitious nature, he took a position in a general store at Afton, working after school hours. He was then sent to Professor Willett's College at Dayton, Ohio, where he took a commercial course, and having completed his studies when 17 years of age he went to Chicago, where he secured a position in the dress goods department of the wholesale dry goods house of A. T. Stewart and Company.

After a year's experience with the above company Mr. Letts decided to embark in business on his own account, and he formed a partnership with A. C. Jordan, under the name of Jordan and Letts and opened up a dry goods store at Marshalltown, Iowa. Success attended his every effort and in 1885 as the business had grown enormously and brought him handsome returns, he determined to extend his operations into other fields. Selecting the wholesale grocery trade as best suited to his inclinations and capabilities he organized at Marshalltown the Letts-Fletcher Company, with a capital of $200,000. This concern rapidly acquired an enormous amount of trade, which induced Mr. Letts to extend the business to other cities. He therefore organized the Letts-Spencer-Smith Company at Mason City, Iowa, with a capital of $150,000, and the Letts-Spencer Grocer Company, at St. Joseph, Mo., with a capital of $250,000. Finding, however, that he could not devote sufficient time and thought to several separate organizations, even though conducting the same class of business, he decided to combine the several corporations into one, in order to more easily and economically manage their affairs. In 1901 he therefore organized the Western Grocer Company with $5,000,000 capital and with headquarters at Marshalltown. The new company took over the old concerns and now owns and operates eight wholesale grocery houses scattered through the states of Missouri, Iowa and Minnesota, which transact an annual volume of business approximating $10,000,000 in value.

In 1904 Mr. Letts also became vice-president and in 1910 president of the National Grocer Company, with $1,500,000 in preferred stock and $2,000,000 common stock, which owns and operates 14 wholesale grocery houses. In 1899 in order to be in closer touch with his various interests he removed his offices to Chicago, and from that city conducts the affairs of the above enterprises. For many years Mr. Letts was a director in the First National Bank of Marshalltown, Iowa; he is a director and one of the largest stockholders of the Pacific-American Fisheries Company, of Bellingham, Washington, which is capitalized at $1,500,000; and has also invested a large amount of capital in the Tillamook Yellow Fir Company, of Oregon, and in the White Brothers' Lumber Company of British Columbia.

Many qualities have combined in Mr. Letts to insure success to all his various undertakings. First of all and probably the most important was his remarkable ability as a business promoter which, coupled with strict principles of business integrity and honor, attracted the confidence of capital and in such degree as each undertaking proved to be successful in like degree it became more and more easy for him to secure financial assistance in promoting still larger enterprises. He also has a wonderful insight into the possibilities of a commercial enterprise and once convinced of the successful issue of an undertaking he has the courage to grasp the opportunity. Combined with the above qualities are an amiable and magnetic personality which at once secures the hearty coöperation of his associates; an agreeable manner, and capacity for hard work, which invites the good will of his employees; and a keen knowledge of human nature, an ability to accurately estimate individual capacity and a spirit of absolute uprightness and fairness in his dealings with his subordinates which immediately engage the complete confidence of his host of employees.

With such attributes it were impossible that a man should fail and undoubtedly they have been the chief contributing factors to his great success. It was only because of his known genius for concentration and organization that he was invited to reorganize the business of A. Booth and Company. The creditors of this concern, which had $7,000,000 capital and 125 branches throughout the United States, were endeavoring to agree upon a plan to avoid liquidation and bankruptcy, but failure resulted from their best efforts, and in 1909 Mr. Letts was urged to undertake the task of straightening out the tangled affairs of the company and of reëstablishing the business upon a profitable basis. Bending to their wishes Mr. Letts reorganized the company as the Booth Fisheries Company and later himself became its president, and the result of his connection with the company has been a larger volume of business than ever transacted in the history of the old company.

Mr. Letts realizes the importance of perfect

health as a factor in business success and therefore devotes his spare moments to healthful outdoor exercise, principally golfing and horseback riding. He has traveled extensively, having visited every state of the United States and almost every section of Europe. He is a member and at one time was president of the Evanston Country Club; is a member of the Union League, Chicago, Midday, and Industrial clubs of Chicago, and the Glenview Golf and the Chicago Golf clubs of Wheaton, Ill.; and is a Knight Templar and a Shriner. His political affiliations are with the Republican party, and he has often been urged to become a candidate for important elective offices, but he has always declined such offers, preferring to remain in private life. He has, however, served on the staffs of Governors Jackson, Drake, and Shaw of Iowa, as aid-de-camp with the rank of colonel. He has been married twice: first at Marshalltown, Iowa, to Mary Julia Smith, who died in 1892, survived by two children—Fred Clayton and Herma Leona (now Mrs. Frank E. Weeks of Joplin, Mo.); and second, at Washington, D. C., on November 11, 1897, to Cora Perkins, daughter of Bishop W. Perkins, formerly United States Senator from Kansas. To the latter union were born two daughters: Courtney Louise and Hollis.

Eben Wright

Eben Wright was born at Boston, Mass., June 16, 1867, one of the two sons of John Harvey Wright and Anna Moriarity Wright. Both of his parents were native Americans, his father having been born at Piermont, N. H., and his mother at Boston, Mass. Eben Wright was educated at the Fay School and St. Mark's at Southboro, Mass., and was a special student at Harvard University, where he was a member of the class of 1889. He did not complete his course at Harvard, however, and after three years of study left college, and for many years thereafter traveled in this and foreign countries.

Mr. Wright's father had for many years taken great delight in collecting rare books and original sketches by the great masters and this would have been a collection that was probably unsurpassed and which would have been invaluable to the art student. Unfortunately, however, the world of art was not destined to possess any of these rare treasures, for most of Dr. Wright's pictures and books were destroyed in the fire that swept over Boston, November 9-10, 1872. The loss was irreparable and to Dr. Wright the shock of their destruction was a sad and severe blow because he had intended to present them to the Boston Art Museum. But the father's loss was in a measure retrieved by the success of the son in securing other valuable works of art, and while many of Dr. Wright's collection could not be duplicated still Eben Wright at the time of his death possessed a collection the equal if not the superior of that lost by his father.

Having been reared in a atmosphere in which he was taught to revere and appreciate art because it represented the sublime and beautiful, it was only natural that Eben Wright should emulate his father in collecting tapestries, rare books and other objects of the same nature. But while undoubtedly Dr. Wright's guidance and training were of untold benefit to the son, they were chiefly instrumental in arousing, developing and refining the latent talent which the son already possessed to a marked degree and which in later life gave him the unerring eye of the connoisseur, quick to detect a sham and whose opinion on tapestry was accepted without question by other collectors.

After leaving college, as has been said, Eben Wright traveled extensively and was thus enabled to indulge his taste for art. For two years he lived in Spain and while there visited all the noted public museums and art galleries and also saw many fine private collections to which access was readily granted him because of his acquaintance with the nobility of Spain. It was Mr. Wright's practice to visit places that were off the general route of travel, and whenever he was informed of the location of a tapestry or other work of art that was especially valuable and that he particularly desired, he was untiring in his efforts to add it to his already large collection. He was not easily prevented from accomplishing the object in view and only abandoned the pursuit after every avenue of his large resources had been closed and after every means that could be employed in attaining the goal had been exhausted. But it was not often that Mr. Wright was compelled to forego the pleasure of securing what he sought, and his magnificent collection evidenced not only that he had traversed many countries in search of treasures, and had spared no trouble or expense to obtain the best, but also that his selections had been made with the discriminating eye of the well and carefully trained connoisseur.

Mr. Wright differed from the generality of collectors in that, while they as a rule usually concentrate their tastes in one direction, his were very catholic, so that in his house the interior decorations (of which he made an exhaustive study), the textiles, the bronzes, enamels, and other bric-a-brac, all made a harmonious whole, instead of giving the effect of a gallery made to exhibit only one department of art. His Gothic dining room, in which every detail is in perfect conformity with the epoch, and yet at the same time compatible with the comforts of modern life, has no parallel in New York.

Mr. Wright was also well known in the social circles of Boston and New York, having been a member of the Union and Racquet clubs of New York, and of the Somerset, Union, and Racquet clubs of Boston. On May 20, 1891, he was married at Newport to Miss Leta Constance Pell, daughter of Walden Pell of New York and to them two daughters were born, Lena P. and Anna. He died June 5, 1908.

EBEN WRIGHT.

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J. B. DICKINSON.

John Bumpstead Dickinson

John Bumpstead Dickinson was born at New York City, June 29, 1814, and died at Chicago, Ill., March 16, 1875. While very young he was taken to the home of his uncle, Platt K. Dickinson, at Wilmington, N. C., where he was reared and educated. His uncle was one of the leading bankers and railroad presidents of that section of the country, and from him the young man gained an extensive knowledge of business affairs.

Returning to New York in early manhood he at once engaged in commercial enterprises and directed his abilities and efforts toward developing the newly opened fields of the Pacific Coast. At that time the chief freight route between New York and the Pacific Coast was by ship to the Gulf of Mexico, thence overland across the Isthmus of Panama, and then again by ship up the coast. Mr. Dickinson had now become well-known in commercial circles both in the East and the West, and in 1841, when only 27 years of age, he sent out his first ship. Shortly afterward he became a member of the firm of Wakeman, Dimon and Company, adding to their business his own numerous connections at San Francisco, in Oregon, in the Sandwich Islands, at Manila, and in the treaty ports of China. Subsequently this firm was reorganized under the name of Wakeman, Gookin and Dickinson and it was with this partnership that he amassed the greater part of his fortune. In connection with the affairs of the firm he was often compelled to undertake perilous journeys. When he was 31 years of age, on one of his expeditions into the far West, he was overtaken by a heavy snowstorm when he reached the Sierra Nevadas and was compelled to continue his journey through ten feet of snow.

In 1859 the famous Comstock Lode was discovered near Virginia City, Nevada, and perceiving the vast possibilities in the development of the mining regions of the vicinity Mr. Dickinson entered actively into the mining industry, becoming an important factor in the development of the three great pioneer mining enterprises of Nevada—the Ophir, the Gould and Curry, and the Central. His great success with these various enterprises earned for him the confidence of other large financial interests, and they sought to enlist his services in the promotion of various industries, thereby securing the advantages of his well-known enterprise, executive ability and business acumen. Mr. Dickinson, however, turned aside many of these offers, selecting a few to which he knew he could give the proper attention. He accordingly allowed himself to be elected president of the Tenth National Bank of New York and also senior director of the National Shoe and Leather Bank. In addition he was president of the Missouri, Kansas and Texas Railway, a director in the Brooklyn Ferry Company, the Dry Dock Company, the Broadway Insurance Company and the Union Mutual Insurance Company of Brooklyn; and also the senior member of the firm of Dickinson and Company, bankers, of New York City.

During the Civil War Mr. Dickinson was able to be very useful to the government, through his personal ownership of vessels and his other connections with shipping interests. Realizing the vital importance to the government of transportation facilities, he placed his own fleet at its disposal and chartered other vessels for its use. These services to the nation in the time of its greatest need brought him into close personal contact with President Lincoln upon whom he urged the military necessity of transcontinental railroads. His influence was powerfully felt in the organization of the Union Pacific Railroad and it was later very fitting that he should be among the distinguished company which celebrated the completion of that road by driving the golden spike at Ogden, Utah.

Mr. Dickinson was a devout member of the Methodist Episcopal Church. He was a large contributor to the benevolent enterprises of his denomination and his private charities were numerous and unostentatious. His home life, filled with the most hospitable spirit, was the centre of social influences of the noblest type. His first marriage was to Elmira Cocks, a lovely and cultivated woman, sister of John D. Cocks, president of the Atlantic Fire Insurance Company. This union was blessed by a family of eight children who have repeated in their own lives the best qualities of noble parents. Some years after the loss of his first wife he married Mary Caroline Low of Fitchburg, Mass., whose life had largely been given to educational, literary and philanthropic work.

Since her husband's death Mrs. Dickinson has continued to occupy herself in these and similar fields of effort, striving to put into practice in her own way such motives as characterized and ennobled his career. In pursuing this object she has been brought in contact with the noblest purposes, as shown by the fact of her wide connection with organizations for religious, educational and social betterment. Among the positions she has filled are the following: president, and now an honorary vice-president, of the National Council of Women of the United States; professor of belles lettres in the University of Denver (where on her enforced resignation she was made professor emeritus, and the chair of literature named for her); one of the originators and from the beginning general secretary of the International Order of The King's Daughters and Sons; author of two volumes of poems, eight novels and innumerable short stories, most of which have a bearing on some phase of human betterment; editor with Edward Everett Hale of his philanthropic magazine, 'Lend-a-Hand,' editor for seven years of 'The Open Window,' devoted to the interest of invalids, and for twenty-five years editor of 'The Silver Cross,' the organ of the Order of The King's Daughters and Sons.

D. Willis James

D. Willis James was born at Liverpool, England, April 15, 1832, the son of an eminent American merchant, Daniel James and his wife Elizabeth Woodbridge Phelps, and died at Bretton Woods, N. H., September 13, 1907. His early education was obtained in the schools of Liverpool and continued at a boarding school on the borders of Lancashire and Yorkshire. He later supplemented this by a course at the Academy at Edinburgh which he attended for three years and another year was devoted to special studies at the University of Edinburgh.

In 1849, when 17 years of age, Mr. James came to New York and in the same year engaged in the metal business, five years later, in 1854, becoming a partner in the firm of Phelps, Dodge and Company, with whom he continued until the time of his death, first as importer and then as importer and manufacturer. For many years prior to his death he was the senior partner of that firm and also of Phelps, James and Company of London. In developing the copper properties of his firm, which were chiefly in Arizona, Mr. James was largely instrumental in opening up and developing the vast natural resources of the West, in connection with which he built railroads and employed a large number of skilled laborers. In bringing these various projects to a successful conclusion Mr. James displayed remarkable breadth of view and a wonderful ability to discern the possibilities of the future, which qualities, united with brilliant business acumen, honesty of purpose and integrity in all his business dealings, contributed toward bringing him well-merited success. At the time of his death he was vice-president of the New York Chamber of Commerce.

Mr. James did not, however, allow his business enterprises to interfere with what he considered his highest aim in life, namely, to spread throughout the world the benefits of a Christian civilization. While he contributed largely of his means and devoted much thought and time to various philanthropic enterprises, his chief interest centered in the promotion of missionary and educational work and in caring for neglected children. For many years he was a corporate member and an active supporter of the American Board of Commissioners for Foreign Missions and his interest in the furtherance of Christian influence grew as the field for such work broadened. He also was for many years president of the Children's Aid Society and thousands of self-respecting citizens throughout the land can testify that but for his wise, patient, and loving work, they would still be denizens of the slums of our great cities and would never have had the chance to bring out the good within them. Through his instrumentality untold numbers considered «beyond the reach of hope or mercy» have risen to become proud, noble and respected members of the community.

He was an ardent advocate of perfecting and pushing educational training in all its phases and he believed that the heart and hand should be trained as well as the head. For more than 40 years he was associated with the Union Theological Seminary, and his inspiring, guiding and sustaining influence undoubtedly stimulated that institution to greater exertions that it might send into the ministry men educated along the broadest lines, intellectually, morally and spiritually, and animated only by a desire to share these advantages with those less fortunate and to use their utmost endeavors to uplift their fellow men. In 1885 Arthur Curtiss James, son of Mr. James, entered Amherst College, and from that time Mr. James exhibited a marked interest in the work of the institution, as he recognized that the spirit and aims of its founders were identical with his own. In 1891 he became a member of the board of trustees and of the finance committee and he not only brought to it the uplifting influence of his own personality but also gave it a princely donation that it might be better able to carry on its splendid work.

In speaking of the services Mr. James rendered the college in his long association with the finance committee one of his associates said:

« Owing to his large business experience and ability, his connection with important current enterprises, and his knowledge and sagacious judgment in respect to moneyed securities, his long service on the Finance Committee of the Board of Trustees was of great value to the College in the investment and management of its funds. He was in favor of wise and liberal expenditures, but was equally solicitous that the income be large enough to cover the outgo, and that the burden of a debt be avoided. However pressed and sometimes overtasked with other duties and responsibilities, his time and thought and counsel were always freely and successfully given to this work for the College.

« Mr. James is a man of warm impulses, high standards and strong convictions. He has decided opinions about men and policies of collegiate administration, which he did not seek to conceal. When he had considered a matter, he was clear as to the course to be pursued and the immediate action to be taken. He was always personally disinterested, transparent in motive and purpose, without pride of opinion or spirit of antagonism, earnest and outspoken but considerate and courteous, and more desirous to persuade than to command. The cases were few, if any, in which the Board was not led to concur heartily and unanimously in the wisdom of the measures which he had at heart. If the question were one involving a consideration of ways and means, it would afterwards be found that he was ready, quietly but generously, to back his opinion with the sinews of war—and this in addition to his magnificent and well-known endowments and gifts to the College.

« It is needless to say that his resignation as a Trustee, though for reasons which could hardly be gainsaid, was accepted, after repeated protest, with great reluctance and a deep sense of personal loss by his associates on the Board.»

It is also needless to say that the services rendered by Mr. James to the college were inestimable and will live not only in the larger ability of the institution to spread useful knowledge but also in the lives of those who have been tutored in the higher aims of life under its beneficent influence. For these advantages unborn generations will rise up to thank the generous benefactor of this great educational institution.

Mr. James was a member of the Century, Metropolitan, and New York Yacht clubs. In 1854 he was married at New York to Miss Ellen S. Curtiss and to them was born one son: Arthur Curtiss James.

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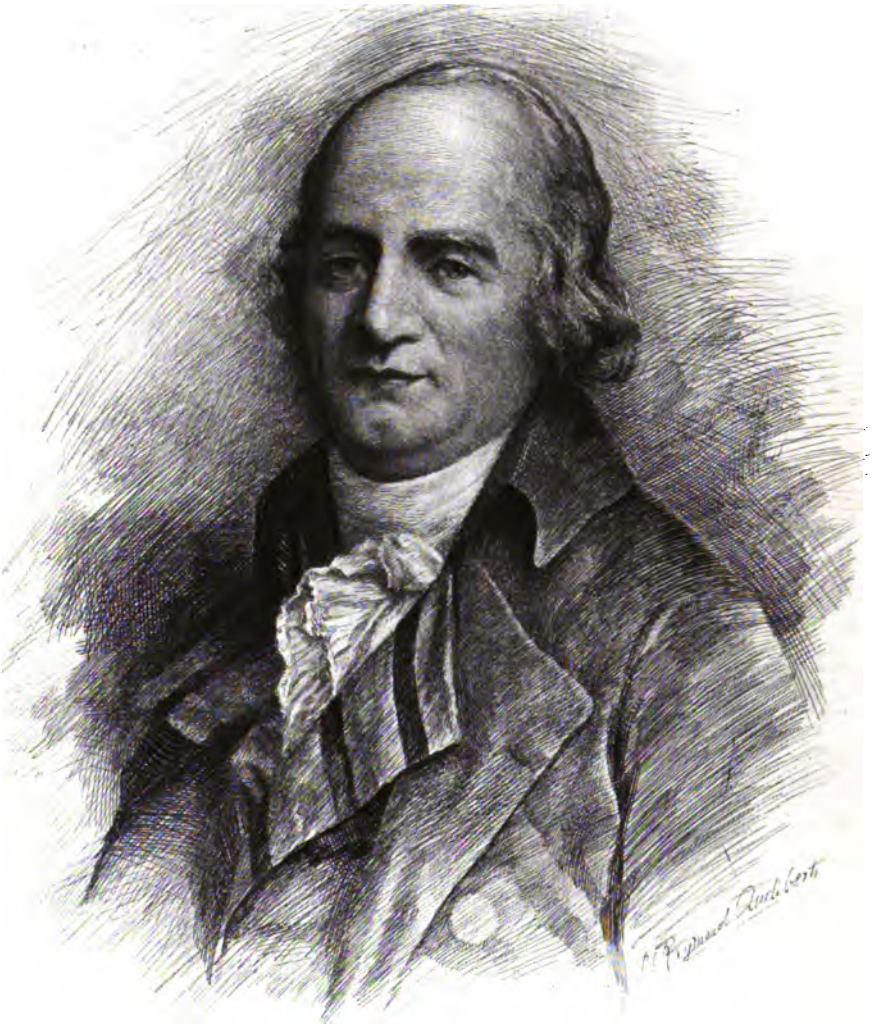


Du Pont (de Nemours)

The DuPont Family

The DuPont Family. The known and authenticated history of the DuPont family dates back prior to the middle of the sixteenth century, the family having begun to make itself known to historical records almost simultaneously with the commencement of the persecution against those adherents of the Reformed religion, known as Huguenots, who had seceded from the Roman Catholic Church. From the very first the French court promulgated decrees against and instituted measures to prevent conversions to Protestantism and to stamp out what little foothold it had gained in the kingdom, in many cases burning the «heretics» at the stake or beheading them. But the Protestant movement seemed to thrive on persecution, and as the sect grew it became involved in still more bitter strife until finally about the year 1560 the whole nation was convulsed in religious disorders and warfare between the two factions which soon assumed the proportions of a civil war.

Among the adherents of the Protestant cause was the DuPont family, the first members of which concerning whom there is any authentic record being the three brothers who lived in Rouen, France: Charles (b. 1529; d. February 19, 1614); Jehan (of the parish of St. Eloi, Rouen, b. 1538; d. August 15, 1604), and Pierre (b. about 1640). The second brother, Jehan, was the common ancestor of the DuPonts of South Carolina, the DuPonts de Nemours, or the Delaware DuPonts, and the Holland DuPonts. To Jehan and his first wife, Guillemine Briere, were born ten children, of whom three were burghers of Rouen, the most prominent being Jonas DuPont, progenitor of the Holland branch (b. 1566; d. 1602), who married Anne de Lestre, and Abraham DuPont (b. 1572; d. July 7, 1640). Abraham DuPont married Marie Cossart and their son Jean (b. 1631; d. in 1707 or 1708) was one of the Huguenots arrested in 1672 and threatened with imprisonment by the court of Rouen because of steadfast adherence to Protestantism. He was later forced to domicile one of a body of cavalry who, after the edict of Nantes was revoked, were brought to Rouen to be quartered upon the Huguenots, and who committed all manner of outrages and brutalities. To Jean and his wife, Marie du Busc, were born six children; the elder son, Abraham DuPont (b. Rouen, December 3, 1658; d. South Carolina, after 1730), became the founder of the DuPont family of South Carolina; and the younger son, Jean DuPont (b. September 16, 1662; d. 1731) was the direct ancestor of the DuPonts who settled in Delaware. Jean DuPont and his wife, Marie de la Porte, had eleven children, one of whom, Samuel DuPont (b. April 19, 1708; d. June 7, 1775) married Anne-Alexandrine de Montchanin, May 19, 1737, and became the father of Pierre Samuel DuPont de Nemours.

Pierre Samuel DuPont de Nemours was born at Paris, France, December 14, 1739, and died at the Eleutherian Mills, near Wilmington, Delaware, August 7, 1817. His early life was devoted to acquiring an education under his mother's tutelage and he was an indefatigable worker and a most precocious child who at an early age gained great distinction in his studies, which included literature, medicine, engineering and military science, etc. He then endeavored to secure employment in the engineer corps of the army and drew plans of fortifications, and also while still a youth tried his hand at writing verse and tragedies. He had evidently made his mark at an early age, for in 1762, when only 23 years old, we find him in the employ of the Duke de Choiseul, Bertin, the comptroller-general of the finances, and Trudaine the elder, aiding them in the solution of various and intricate problems connected with commerce and agriculture. In 1763 he achieved considerable notoriety by publishing two pamphlets which criticized a new scheme of taxation then under consideration and these gained for him the favorable notice of Voltaire, the elder Mirabeau and the celebrated economist François Quesnay, who for some time thereafter instructed him in the principles of political economy. His aptness in his studies made him a favorite with Quesnay and he thenceforth became an able instrument for spreading the doctrines of that particular school of economists who were then strenuously opposing the prevalent abuses which were stifling commercial enterprise and ruining the agricultural industries. In 1764 DuPont published his first important book, entitled 'De l' Exportation et de l' Importation des Grains,' which had a large sale and immediately stamped him as an original and vigorous thinker. He also at this time became acquainted with Anne Robert Jacques Turgot, intendant of Limoges, and the acquaintance gradually ripened into a warm friendship which was destined to play an important part in his later career.

In 1765 Laverdy, Bertin's successor, appointed DuPont editor of the 'Journal de l' Agriculture, du Commerce, et des Finance,' a semi-official publication, but DuPont's economic ideas, as developed in the columns of the 'Journal,' were not agreeable to those in authority and during the following year he was compelled to relinquish the editorship. His next literary effort was the publication in 1767 of a work entitled 'Physiocratie,' a compendium of Quesnay's system, and in May, 1768, he was appointed editor of 'Les Éphémérides du Citoyen,' the organ if the economists, succeeding Baudeau in that position, and to this and other papers he contributed many interesting articles and editorials advocating the liberty of the press, the abolition of slavery and of the exclusive privileges enjoyed by the French East and West India Companies, the removal of all restrictions from commerce and labor, the suppression of the oppressive tax called «Corvée,» the repeal of the game laws, reform in public charities, etc. In these writings he did not fail to apply the theory of his favorite system of economy nor to incorporate his most advanced views on other subjects and he consequently

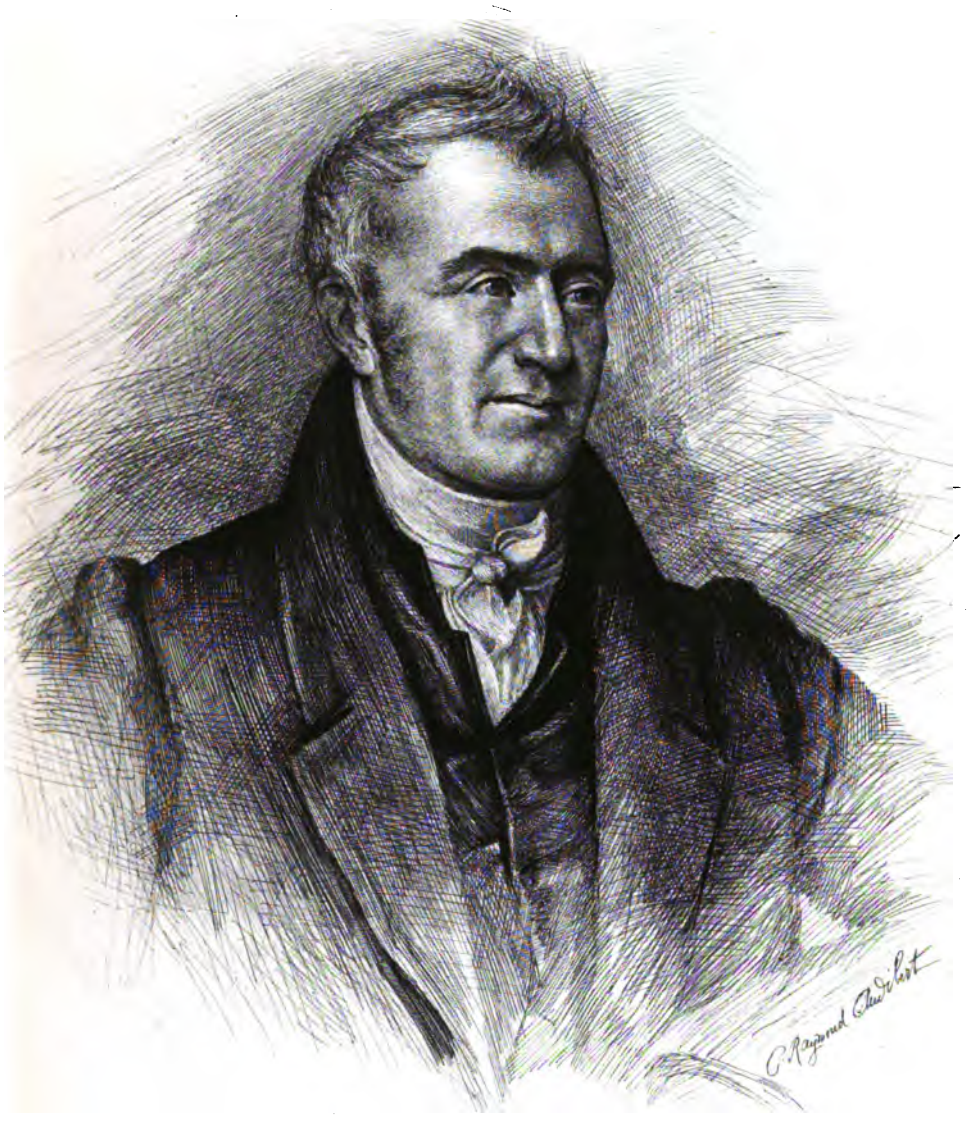
fell under the displeasure of Abbé Terray, the comptroller-general who dismissed him from the public service, and prohibited the publication of the 'Ephémérides.'

Though disgraced at home he was appreciated in foreign countries where he was the recipient of many acts of favor and of various titles and decorations, among the donors being the kings of Poland and Sweden and the Margrave of Baden. In 1774 he was appointed by King Stanislaus Augustus of Poland secretary of the Council of Public Instruction with a commission to organize a system of national education. He had been engaged in this arduous undertaking only a short time, however, when, later in the same year, at the instance of Turgot, who had now succeeded Terray as comptroller-general, King Louis XVI. formally recalled him to France and commissioned him inspector-general of commerce. As head of that bureau and as the «right arm of Turgot» DuPont now had the opportunity to call into actual being many of the reforms which he had so long and so earnestly advocated. To his brilliant mind were due many of the real reforms in local, national and even international commercial relations which were instituted in Turgot's name, and he had also prepared a 'Report on Municipalities' which was essentially a programme of a liberal constitution, but before Turgot had submitted it to the king he was forced into retirement (1776), and was succeeded by Jean Frédéric Phélypeaux, Comte de Maurepas, who was inimical to DuPont.

Again a second time was DuPont forced to undergo the humiliation of retirement but his enforced absence from Paris lasted only two years which were passed in agricultural and literary pursuits at his country home and in 1778 he was recalled to active duty by Jacques Necker, the successor of Maurepas. He now entered upon a long period of active service and so conducted the affairs of his office as to raise himself high in the esteem of his superiors with the result that he was promoted to positions of greater importance and entrusted with tasks of the most delicate nature. Having always been an ardent advocate of the cause of American liberty he was entrusted by the Count de Vergennes with the delicate mission of conducting the secret negotiations with the English representative, Dr. Hutton, which laid the basis for the peace treaty of 1783 by which Great Britain acknowledged the independence of the United States. Still later, in 1786, he conducted the more complicated negotiations which resulted in the liberal commercial treaty between France and Great Britain, and for these two services he was created a councillor of state. As inspector-general of commerce DuPont also conducted the negotiations with Thomas Jefferson, the American minister to France, which finally resulted in the satisfactory adjustment of the commercial disputes which had arisen between the two countries, particularly the dispute regarding the treatment accorded American goods in the French customs houses and the unjust treatment experienced at the hands of the managers of the royal tobacco monopoly. Soon afterward Vergennes appointed DuPont a member of the Commission on Agriculture and in 1787-88 he was secretary-general of both the Assemblies of Notables, in which capacity he drew up the various measures of reform presented by Calonne and his successor, Fourqueux. These measures earned for him the animosity of the clergy and the privileged classes, and when Archbishop Brienne succeeded to the ministry it was only the personal influence of Louis XVI. that saved him from being once again disgraced and banished from Paris.

At the beginning of the Revolution in France, DuPont was a member of the States-General from Nemours and later represented that electorate in the Constituent Assembly of which he was twice elected president. He belonged to the party which favored a constitutional monarchy and he endeavored to secure the adoption of numerous political and financial reforms, including his old plan of provincial and municipal legislatures. His chief work in the Assembly therefore was the formation of radical fiscal reforms, and so fearlessly and effectively did he denounce the creation of an irredeemable paper currency that on September 2, 1790, he was attacked and nearly killed by a mob. Shortly afterward the Assembly was dissolved and DuPont undertook the editorship of the 'Correspondence Patriotique,' in addition publishing various pamphlets upholding the new constitution and demanding the enforcement of the laws, the most noteworthy of which were his memorable letters denouncing Pétion, the mayor of Paris. Affairs throughout the nation had now reached an alarming crisis and the populace clamored for the overthrow of the king, on August 10, 1792, a large armed force attacking the Tuileries in an attempt to capture him or force him to abdicate. DuPont and his son, Eleuthère Irénée, were among those who undertook to defend the king's person, and after the attack had failed in its chief object (the king having escaped to the Assembly) DuPont and his son with the others escaped from the Tuileries and made for safety by various routes. DuPont, though marked by the Jacobins for subsequent destruction, managed to elude pursuit and made his way to the observatory of the College des Quatre-Nations (now the Institute of France) where inside the dome the astronomer Lalande and his assistant Harmand hid him until September 2, when he escaped in disguise to Cormeilles, not far distant. There he remained for a month and did not arrive at his home, Bois-des-Fossés, until November 9, after having undergone a painful and hazardous journey.

At his home DuPont lived in comparative safety as he was universally beloved and no one would betray his retreat. He devoted himself to literary pursuits, producing his 'Philosophie de l' Univers,' but was not destined to enjoy peace and tranquillity for any great length of time, for on June 20, 1794, he was again imprisoned and sentenced to the guillotine, a fate from which he had the good fortune to be spared only by the timely death of Robespierre (which occurred July 28) and on August 24 he was released. He immediately renewed his attacks on the Jacobins, chiefly in his writings which included 'Plaidoyer de Lycias,' wherein he compared the crimes of the Reign of Terror with an episode in Greek history; 'Constitution pour la République Française' (1795), etc. He also at this time founded and edited a political jour-



E. I. du Pont de Nemours

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nal called 'The Historian.' In 1795 he was elected a member of the Council of the Ancients and two years later was chosen its president, sturdily resisting the pretensions of the Council of Five Hundred and the Directory. But the Jacobins broke up the Councils of the Ancients with Augureau's troops and as DuPont was recognized as the leader of the popular party of moderate liberals he was imprisoned and his property confiscated. Having been released he decided in 1799 to emigrate with his family to America where he was received with great marks of distinction. With his other relatives he established a banking and commercial business at New York, under the name of DuPont de Nemours, Fils, et Cie, but in 1805 it failed because, through the personal animosity of Napoleon, the French government refused to reimburse the firm for funds advanced to the French West Indies fleet which was then in distress in New York. While in America Jefferson requested him to prepare a scheme for a system of national education in the United States and after a very careful study he wrote a book on the subject, but though the plan was never adopted in the United States some of its features were embodied in the French code.

In 1802 DuPont returned to France and notwithstanding the offers made to him by Napoleon, he declined all political offices. He was, however, instrumental in promoting the treaty of 1803 by which the United States purchased Louisiana and he was appointed one of the commissioners to arrange the formal transfer. Soon after his return he also became secretary and three years later president of the Paris chamber of commerce and in 1807 accepted the position of sub-librarian at the Arsenal, devoting his leisure time to aiding charitable institutions and to literary and scientific research, principally for the Institute of France of which he was a member. The most noteworthy of his writings of this period are 'Sur le droit de marque de cuirs' (1804); 'Sur le Banque de France avec une theorie des banques' (1806); 'Mémoires sur differens sujets d' Histoire Naturelle' (1807); 'Examen de Malthus et lettre à Say' (Philadelphia, 1817); and a French translation of the first three cantos of 'Orlando Furioso' (1815). The second named was seized by the French police and its further publication prohibited, but in 1811 it was republished at London with preliminary notes.

After Napoleon's first downfall in 1814 DuPont became secretary of the provisional government that prepared the return of Louis XVIII., and after the restoration of the Bourbons he was again named councillor of state. In 1815, however, Napoleon escaped from Elba and the royalists were again forced to flee, DuPont going to America where he spent the remainder of his days with his sons in Delaware, passing away at Eleutherian Mills, near Wilmington. August 7, 1817. DuPont was twice married: first on January 26, 1766. to Nicole-Charlotte Marie-Louise Le Dée de Roccourt, who died September 3, 1784; and second to Marie Françoise Robin, widow of the celebrated traveler and administrator, Pierre Poivre. His second wife survived him, dying at Paris in 1830. By his first wife DuPont had three children: Victor Marie (b. Paris, October 1, 1767; d. Philadelphia, Pa.. January 30, 1827, the father of Rear-Admiral Samuel F. DuPont); Paul François (b. December, 1769; d. January, 1770); and Eleuthère Irénée.

ELEUTHERE IRÉNÉE DUPONT DE NEMOURS was born at Paris, France, June 24, 1771, the son of Pierre Samuel DuPont de Nemours and his wife Nicole-Charlotte Marie-Louise Le Dée de Roccourt, and godson of the celebrated Turgot, and died at Philadelphia, Pa., October 31, 1834. He was reared in the country at Bois-des-Fossés, in what is now the department of the Seine-et-Marne, and his tastes early turned toward agricultural and scientific pursuits. His father's friend, Antoine Laurent Lavoisier, then superintendent of the government powder mills at Essonne (Régie Royale des Poudres et Salpetres) took a great liking to the lad and determined that he would secure for him the right of succession to the superintendency. With this object in view the boy was taken to the powder mills at Essonne to learn the scientific details and the practical methods connected with the manufacture of powder and he remained there for some time, but before his education at the mills was completed the events of the French Revolution entirely changed the course of his career.

His father, Pierre Samuel, while a member of the Constituent Assembly, had been a leading advocate of a constitutional monarchy and on June 8, 1791, had established a large printing and publishing house in the interest of the conservative party. Irénée, as the son was generally known, was called to Paris to take charge of this establishment and in consequence of his father's political activities the son also became involved in the furious struggle then taking place, being imprisoned three times and frequently exposed to great personal danger. Like his father, being a supporter of King Louis XVI., he was in the utmost peril on the fatal day of August 10, 1792, when he and his father and others fought an armed mob that had attacked the Tuileries in an attempt to capture the king. After the king fled from the palace both father and son escaped and Irénée for some time remained in concealment at Essonne. After the Reign of Terror had subsided he supported his father in opposing the Jacobins and succeeded in beating them at the polls, but on September 5, 1797, they called in the troops under Augureau, overthrew the government and imprisoned the father and a mob sacked and destroyed the printing establishment.

Thoroughly dismayed and discouraged by these disasters Irénée joined his father and brother and their families, in emigrating to the United States where they landed January 1, 1800, at Newport, R. I. Not long after his arrival his attention was called by an accident to the poor quality of the gunpowder then made in the United States and he determined to engage in the industry here. With this object in view he therefore returned to France in January, 1801, procured plans and models of improved machinery at Essonne and in the following August returned to the United States with some of the machinery.

Thomas Jefferson had been very friendly with his father and he now urged Irénée to establish his new industry in Virginia, but owing

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to suspend the order. DuPont thereupon applied to General John A. Dix commanding the Federal troops at Baltimore and the latter sent a body of troops to Delaware to maintain the supremacy of the general government in that state.

Like his ancestors Henry DuPont had a great attachment for rural life and agricultural pursuits, and he was probably the largest individual land-owner in the state. He was also very popular among his tenants and employees, always taking a great interest in their affairs and caring for them with tender solicitude during times of trial and tribulation. He was liberal in his thoughts but very decided in his opinions and once a conclusion had been reached rarely changed his opinion; in business affairs he was industrious and enterprising, prudent and sagacious, and absolutely fair in all his dealings. He was widely known for his many benefactions which were not bestowed in large gifts to one object but given in small donations to an innumerable number of charitable institutions and to persons whom he thought deserving. He took a lively interest in local affairs and was ever to be found in favor of public improvement. On July 15. 1837. he was married to Louisa Gerhard, daughter of William Gerhard and Sarah Wood, who survived him, and to them were born two sons: Henry Algernon (now United States Senator). and William (b. August 21, 1855); and seven daughters: Evelina (b. October 9. 1840); Ellen Eugenia (b. March 29, 1843; d. January 27. 1907); Louisa Gerhard (b. February 23, 1845; d. July 2. 1863); Sara (b. January 29, 1847; d. April 29. 1876); Victorine Elizabeth (b. March 1, 1849); Sophie Madeleine (b. January 1, 1851) and Mary Constance (b. February 10, 1854; d. September 3, 1854).

Samuel Francis DuPont was born at Bergen Point, N. J., September 27, 1803, the third son of the five children of Victor Marie DuPont de Nemours and Gabrielle Josephine la Fite de Pelleport (daughter of Gabriel Réné de la Fite, Marquis de Pelleport) and a grandson of Pierre Samuel DuPont de Nemours. He died at Philadelphia, Pa., June 23, 1865. His father, who was born at Paris, October 1, 1767, entered upon a diplomatic career; from 1787 to 1789 was attached to the French legation in the United States; during the Revolution in France. from 1789 to 1791, was aid-de-camp to Lafayette, then commanding the national guard; at various times from 1791 to 1795 was engaged in the French diplomatic service in the United States; and in the latter year became French consul at Charleston, S C. In 1798 he was appointed French consul-general in the United States but shortly afterward returned to France. Late in 1799 he came back to this country and with other members of the family established the unfortunate banking house of DuPont de Nemours, Fils, et Cie, which for reasons before given failed in 1805; in 1806 he removed to Angelica, Genesee County, N. Y., where he stayed three years; and in 1809 started a cloth manufactory near Wilmington, Delaware. During the War of 1812 he was captain of a company of Delaware volunteers; afterward was a director of the Bank of the United States; and a member of the Delaware legislature. He died at Philadelphia, Pa., January 30, 1827.

Shortly after his birth the parents of Samuel Francis removed from Bergen Point to Louviers, Delaware, and there the youth of the future admiral was passed. On December 19, 1815, when little more than 12 years of age, President Madison appointed him a midshipman in the navy and almost simultaneously he received an offer of a cadetship at West Point, but his inclinations were toward the seafaring life and he accepted the naval appointment. His first service was a voyage to the Mediterranean on the Franklin, a 74, under command of Commodore Charles Stewart, but he was later transferred to the Erie on the same station. From 1821 to 1822 he served aboard the Constitution in the Mediterranean until ordered home for examination, after which he was attached to the Congress for a cruise in the vicinity of the West Indies and off the coast of Brazil. In 1824 he was again sent to the Mediterranean station on board the North Carolina, of which he eventually became sailing master. On April 28, 1826, he was raised to the rank of lieutenant and soon afterward ordered to the Porpoise, in which he cruised for four months, but in 1829 he was transferred to the Ontario and from that time until 1832 cruised in European waters. From 1835 to 1838 he was executive officer of the Warren and of the Constellation and commanded the Grampus and the Warren in the Gulf of Mexico, in September of the latter year being attached to the Ohio, flagship of Commodore Hull, in the Mediterranean and continuing at that post until 1841.

In April, 1842, DuPont was raised to the rank of commander and sent to China in the Perry, but ill health forced him to leave his ship at Rio Janeiro and return home. Three years later, in 1845, when the naval academy at Annapolis was founded, he assisted Commodore Franklin Buchanan in perfecting the organization and administration of the school but he did not continue long at this post and in the same year was transferred to the Congress on the Pacific station under Commodore Robert F. Stockton. By the time the Pacific coast was reached the Mexican War had broken out and on July 26, 1846, DuPont was again transferred, being placed in command of the Cyane and taking a prominent part in all the operations in that section of the country. He was ordered to clear the Gulf of California of hostile vessels and he captured or destroyed more than 60, in the course of the various operations also taking San Diego, and La Paz, the capital of Lower California, spiking the guns of San Blas, and burning two gunboats and capturing a Mexican brig under a heavy fire in the harbor of Guaymas. On November 11, 1847, he led the fleet under Commodore William B. Shubrick into the main harbor of Mazatlan, which surrendered after a short but severe action. On February 15, 1848, he landed at San José with a naval force of 100 officers and men, drove off an immensely superior body of Mexicans, and, marching three miles inland, fought his way in to the relief of Lieutenant Heywood's detachment which was beleagured and brought to great distress in the Mission

House and on the point of surrendering. He also took part in several other expeditions sent to the interior to clear the country of hostile troops and acquitted himself honorably of his duties. The conquest of California now having been effected, the Cyane was employed in blockade duty on the west coast of Mexico and in cruising in the Gulf of California.

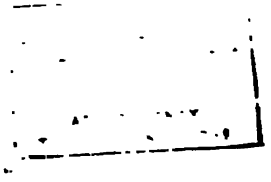
In 1848 DuPont was ordered home and in October of that year reached Norfolk, after three years of constant and efficient service in which he had sailed 65,000 miles. Upon his return he was apointed examiner of midshipmen and reviser of the rules of the Naval Academy, later becoming a member of the Light House Board, with which service was combined the command of the receiving ship at Philadelphia. In 1855 he became a captain and in the same year was appointed a member of the naval retiring board, upon him falling the greatest portion of the odium attached to the faithful execution of the expurgating law. When the names of those selected for retirement became known, DuPont was compelled to face «a whirlwind of disappointed ambition, denunciation, and even slander and personal abuse,» and his hitherto well-nigh universal popularity considerably waned. But he remained true to his convictions, confident that when the fury of the storm had passed the justice of his action would be apparent to all and that time would bring him a vindication. It was, however, the most painful and trying period of his career. In 1857 he was appointed to the command of the Minnesota in the East India squadron and dispatched on special service to China, while on this service witnessing the naval operations of the French and English forces and particularly their storming of the Chinese forts on the Peiho. He then visited Japan, India and Arabia, in May, 1859, reached Boston, and on December 31, 1860, after having served on various boards of examination, was placed in command of the Philadelphia navy yard. Shortly after some troops were to be sent to Annapolis, Md., but communication with Washington was interrupted and upon his own responsibility he sent a detachment to cover the debarkation.

In June, 1861, DuPont was made president of the board which convened at Washington for the purpose of planning naval operations against the Confederacy. In the following September he was appointed flag-officer and ordered to the command of the South Atlantic blockading squadron, in the following month, October, leading from Norfolk a fleet of about 60 warships and transports, which up to that time was the largest fleet ever commanded by an American officer. A paper blockade of the Southern ports was succeeded by a blockade *de facto* and a long line of coast with its adjacent rivers and harbors fell into the possession of the Federal authorities. The first important engagement occurred on November 7, 1861, when DuPont safely and skillfully carried his fleet of wooden vessels, led by his flagship, the Wabash, into the harbor of Port Royal.

It had been agreed between DuPont and General Thomas W. Sherman, who was to organize a land force of 12,000 men to accompany the naval expedition, to seize Port Royal Bay, one of the finest harbors on the coast, 56 miles south of Charleston and 25 miles north of Savannah. On November 6 the fleet assembled off the entrance to Port Royal Bay, the gunboats, preceding, having driven into the harbor three Confederate gunboats under command of Josiah Tatnall that had attacked them, and coming under a long cross-fire from two works commanding the harbor entrance. The bay was defended by two earthworks and some shore batteries, one earthwork on each side of the entrance, Fort Walker to the south on Hilton Head and Fort Beauregard to the north on Bay Point, St. Phillips Island, the distance between the two being 2½ miles. These works were strong and well constructed, mounted 42 heavy guns, of which 22 were in Fort Walker, and were garrisoned by 3,000 troops under General T. E. Drayton. DuPont divided his fleet into main and flanking divisions, the flagship Wabash to lead the main column with nine other vessels, a ship's length apart, while the flanking column of five gunboats was to move on the right. The plan of battle was as follows: the main fleet was to steam up the roads on the Bay Point side pouring broadsides into Fort Walker until the vessels had reached a point two miles above the fort when they should turn, again pass the fort and deliver their broadsides and enfilade its two water-faces. The fleet was to follow this elliptical course until the fort surrendered. Meanwhile the flanking column was to pass and attack Fort Beauregard in the same manner except that having reached a point two miles above the fort it was to remain there and hold Tatnall's three gunboats in check and to see that no attack was made on the fleet of transports outside the entrance.

At 9 a. m., Thursday, November 7, the fleet advanced to battle with perfect regularity, DuPont leading in the Wabash and receiving the first fire from both forts at 9.26. Replying to both he steamed two miles beyond, turned to the left in a wide circle and passing Fort Walker at 800 yards opened upon it broadside after broadside, the other vessels of the fleet following in line. The fire from the fleet was one continuous and terrific roar, but the forts maintained a rapid reply notwithstanding that hundreds of shells were dropping into them and almost burying the defenders by the dirt they threw up. Simultaneously the flanking column steamed up the bay nearer to Bay Point, attacked Fort Beauregard and then, veering to the other side, drove Tatnall's fleet into Scull Creek, took a position flanking Fort Walker and poured thunderous broadsides into it without reply as the one gun on that side of the fort had been disabled by a round shot. At 11 a. m. the main column again passed in front of Fort Walker 300 yards nearer than at first, and opened up a still more terrific fire, part of which was directed against Fort Beauregard, inflicting heavy damage. Nothing human could withstand the awful carnage wrought by DuPont's missiles and after the maneuver had been repeated the third time Fort Walker was abandoned by the Confederates, and at 2.20 p. m. the Union flag was unfurled over the fort. At 5 p. m. Fort Beauregard was abandoned after its guns had been spiked and the greater part of the powder destroyed and soon afterward the transports

S. F. Du Pont



came into the bay and landed General H. G. Wright's brigade at Hilton Head. General Stevens' brigade occupied Fort Beauregard the next morning. The Union loss was 8 killed and 23 wounded; the Confederate loss, 11 killed, 48 wounded, and 7 missing.* Thus by able seamanship, comprehensive military judgment and intelligent and aggressive warfare and yet withal with inconsiderable casualties, DuPont had accomplished all and more than the task allotted him, and by securing an admirable base of supplies and of future naval and military operations he had performed a service of surpassing value in its moral and political effect both at home and abroad.

But DuPont did not rest content with his present laurels. Flushed with success he steadily pushed forward to inflict further damage on the seaports of the Confederacy, seizing Tybee, which gave a foothold for the capture of Fort Pulaski; destroying the batteries at Port Royal Ferry by a combined naval and military expedition; occupying the sounds and inland waters of Georgia and the east coast of Florida; between March 2 and 7 capturing St. Mary's, Fernandina, Jacksonville, Fort Clinch, on Amelia Island, the fort at St. Augustine, and Brunswick, Ga.; and establishing 14 blockading stations along the coast, all of which were effective but the one at Charleston where the number of vessels was insufficient to cover the circuit. In June, 1862, therefore, he was rewarded by Congress for these eminent services by being promoted to the rank of rear-admiral to take effect July 16, 1862.

The battle of the Merrimac and Monitor on March 9, 1862, completely revolutionized the methods of naval warfare for the entire world and the clamor in the North for iron-clad ships became so widespread and insistent that the construction of such vessels was immediately begun and vigorously pushed. Seven more vessels of the Monitor type and another, the New Ironsides, better planned and more seaworthy, were rapidly completed and added to the squadron under DuPont, one of them soon attacking and destroying the Confederate steamer Nashville when aground near Fort McAllister. DuPont was very desirous of putting the new style vessels to a severe test, pitting them against strong forts commanding obstructed channels, and he therefore sent three monitors supported by six other ships against Fort McAllister, but they were unable to make any impression upon the fort owing to the small number of their guns and the slowness of their fire. This convinced the admiral that the value of these vessels had been overrated, for in his despatch No. 41, dated January 28, 1863, he said: «My own previous impressions of these vessels, frequently expressed to Assistant Secretary Fox, have been confirmed, viz., that whatever degree of impenetrability they might have, there was no corresponding quality of aggression or destruction as against forts.» He also subsequently said: «This experiment also convinced me of another impression, firmly held and after expressed, that in all such operations, to secure success, troops are necessary."

The Navy Department, however, was not convinced and determined to make another and still more pretentious experiment, ordering DuPont to attack Charleston. DuPont said that while he knew the views of the Department did not coincide with his own he «determined to make the experiment and to risk and probably lose whatever of prestige pertained to a long and successful professional career, in order to meet the necessities of war and the wishes of the Government.» The Confederates under Beauregard had erected defences at Charleston of the most extensive and formidable character. Beginning with the northern or eastern entrance by way of Maffit's Channel, there were three large and powerful forts on Sullivan's Island, including Fort Moultrie; in the middle of the channel on an artificial island near the entrance to the harbor, 1½ miles west of Fort Moultrie, stood Fort Sumter; on the northerly side of the inner harbor were Battery Bee, Mount Pleasant battery on the main land, and Castle Pinckney on an island about a mile from the city. On the other side of the harbor (the southern) were Wappo battery on James Island, and Fort Johnson; between the latter and Castle Pinckney in the «middle ground» was Fort Ripley; on Cumming's Point, Morris Islet, opposite Fort Moultrie, was Battery Gregg, a mile south of which was Fort Wagner. On Light House Island there was also a fort covering the landing at that place. In these works the Confederates had mounted several hundred guns; and in addition they had mined the channel between Fort Sumter and Sullivan's Island and in the channel between Sumter and Cumming's Point had sunk four rows of piles, extending nearly up to Charleston.

At 12.30 p. m. Saturday, April 7, DuPont gave the signal from his flagship, the New Ironsides, for the fleet to weigh anchor and move to the attack, it being planned that they were to take position a cable's length apart in the following order: Weehawken, Passaic, Montauk, Patapsco, New Ironsides, Catskill, Nantucket, Nahant, and Keokuk. The Canandaigua and four other gunboats were formed into a reserve outside the harbor and after Fort Sumter had been reduced they were to support the iron-clads in attacking the batteries on Morris Island. The flagship New Ironsides was a formidable iron-covered battery, mounting 18 guns: 16 11-inch and two 200 pound Parrots; the other vessels were of the monitor class, each carrying two guns (a 15 inch and a 11 inch) to a single turret, except the Keokuk which had two turrets with an 11 inch gun in each. Soon after starting a raft, which had been attached to the Weehawken for the purpose of exploding torpedoes and clearing away obstacles, became deranged and an hour's delay occurred. This difficulty being overcome the fleet moved forward expecting to be deluged with shot from the batteries on Morris Island but to DuPont's surprise the Confederates allowed the fleet to pass in silence. The iron-clads then entered the inner harbor and about 3 p. m., came within range of Fort Sumter and the batteries on Sullivan's Island. The action immediately be-

* Consult the 'Official Records, War of the Rebellion,' Vol. vi; 'Naval War Records,' Vol. xii; Maclay, 'History of the United States Navy,' Vol. ii; Century Company, 'Battles and Leaders of the Civil War,' Vol. i; Ammen, 'The Atlantic Coast.'

gan; the guns of Moultrie opened on the Weehawken and were followed by those of Fort Sumter and of the powerful batteries on Sullivan's and Morris islands. It had been planned to pass around Sumter and make the assault on the northwest face which was supposed to be its weakest spot, but Captain John Rodgers, commanding the Weehawken, found almost immediately that he could not force his ship through the obstructions and a scene of great confusion followed. Rodgers attempted to turn his ship to get a better position as the channel was narrow and tortuous and the tide strong, but the tide prevented. DuPont's flagship, the Ironsides, was also caught in the tideway and refused to obey the helm so that it twice became necessary to drop anchor in order to bring her bow in the proper direction; and to add to the annoyance the Catskill and Nantucket fell foul of the Ironsides and it was some time before they were cleared and passed on.

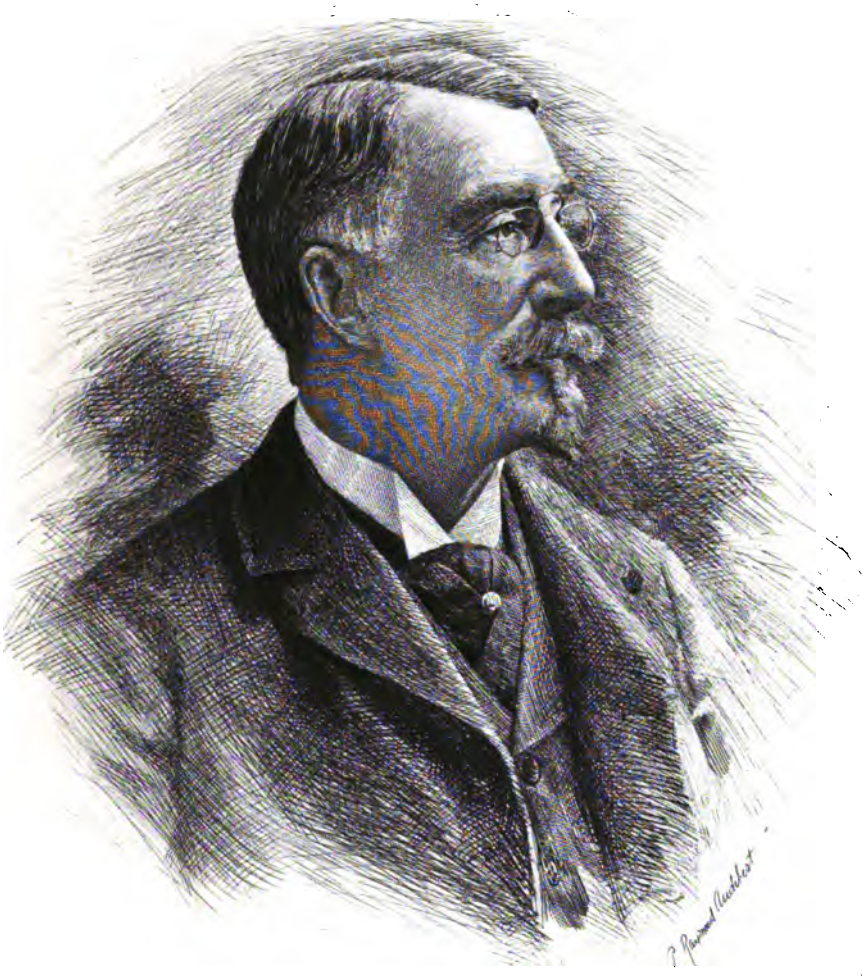
In this state of affairs DuPont signaled the fleet to disregard the movements of the flagship and to act independently in the positions deemed most available. Shortly before 4 p. m., therefore, the eight iron-clads ranged opposite the eastern and northeastern fronts of Sumter, at distances varying from 550 to 800 yards, and opened a terrific fire. Lieutenant-Commander A. C. Rhind, in command of the Keokuk, pushed his vessel up to within 500 yards of the fort and became a special target for its guns; and the other commanders bravely strove to accomplish the reduction of the fort but it was impossible to long endure the hurricane of fire directed against them by the Confederates. During the brief engagement of 40 minutes the fleet fired 151 shots of which only 34 hit the walls of the fort; while Sumter fired 810 shots and Moultrie and the other batteries discharged 1,399, in all 2,209, of which 520 struck the different vessels. The Keokuk received her death-blow within 30 minutes; she was struck 90 times and had 19 holes above and below the waterline, as a result of which she sank off Morris Island and her armament fell into the hands of the Confederates. As several of the other iron-clads began to show signs of distress, as darkness was approaching and as he also believed that "half an hour more fighting would have placed them all *hors de combat*," DuPont about 5 o'clock gave the signal to withdraw from action in order, as he said, to "prevent a failure from being converted into a disaster," intending to resume the attack next morning. So furious and so vigorous had been the attack and so stubborn and persistently intrepid had been the resistance that it would have been remarkable if any of the vessels had withdrawn unscathed, and upon receiving the reports of injuries to vessels from the various commanders and after considering the inadequacy of his fleet DuPont deemed it wise not to invite certain disaster by renewing the attack the next day. General Hunter, who expected to attack by land after the reduction of the forts, had viewed the action from the vicinity of Stono Inlet and wrote to DuPont as follows: "A mere spectator I could do nothing but pray for you, which believe me, I did most heartily, for you and all the gallant men under your command, who sailed so calmly and fearlessly into and under and through a concentric fire which has never heretofore had a parallel in the history of warfare. * * * No country can ever fail that has men capable of suffering what your iron-clads had yesterday to endure."*

The results of this action astounded the country who had expected unreasonably great things from the iron-clads, and when DuPont expressed his conviction that it was utterly impracticable to take Charleston unless with the support and cooperation of a strong land force, his courage was impugned and his pride wounded by unjust and ignorant aspersions of all kinds. But time has fully confirmed the correctness of DuPont's judgment and his successor in command, Rear-Admiral John A. Dahlgren, was no more successful with a larger force, Charleston remaining in the hands of the enemy until taken by Sherman's army early in 1865. In Dahlgren's 'Memoir' will be found ample material to exonerate DuPont and to justify the counsel he gave and the course he pursued and the history of the navy since that time further attests the truth of his assertions.

After the engagement before Charleston DuPont remained comparatively quiet for some time, his principal duties being to maintain a close blockade and to capture blockade runners. In June the inactivity of the fleet was suddenly terminated by the news that the Confederate iron-clad ram Atlanta had left Savannah on the 16th for Warsaw Sound by way of Wilmington, fully prepared to attack the blockading squadron. Commander Drake on the Cimerone was maintaining an inside blockade at Warsaw Sound and DuPont therefore sent the Weehawken, Captain John Rodgers, and the Nahant, Commander J. Downes, to Drake's assistance. At 6 a. m. on June 17, the Atlanta came in sight and steered for the Federal iron-clads, reserving her fire for close quarters, but Rodgers, not waiting for close range, anticipated her fire and at once engaged her. The first 15 inch shot from the Weehawken took off the top of the Atlanta's pilot house wounding two of her three pilots while the second shot struck half way up her roof, killing 1 and wounding 17 men. In consequence of these injuries the Atlanta grounded and immediately afterward surrendered, being taken with her officers and men to Port Royal. This event, while not shaking DuPont's convictions, tended to confirm the views of the Navy Department, the Secretary later expressing the opinion that "this remarkable result was an additional testimony in favor of the monitor class of vessels for harbor defence and coast service against any naval vessels that have been, or are likely to be, constructed to visit our shores,"—a very different thing, however, from attacking powerful land batteries. This was the last important engagement that occurred while DuPont had command of the fleet as he was relieved from command July 5, 1863, and succeeded by Rear-Admiral Dahlgren.

Admiral DuPont was also favorably known

* On this and the subsequent attacks see 'Official Records, War of the Rebellion,' Vols. i-xxvii; 'Naval War Records,' Vol. xiv; Doubleday, 'Reminiscences of Forts Sumter and Moultrie;' Century Company, 'Battles and Leaders of the Civil War,' Vols. i and iv; Gillmore, 'Engineer and Military Operations Against Charleston in 1863.'



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as the author of various papers on professional subjects, among which were those on corporal punishment in the navy and on the use of floating batteries for coast defense, subsequently republished, and from which Sir Howard Douglas makes frequent quotations in his 'Treatise on Naval Gunnery.' DuPont did not live long after the close of the war, passing away at Philadelphia, Pa., June 23, 1865. He had no children and was survived only by his wife, (also his cousin) whom he had married in 1833, as Sophie Madeleine DuPont, daughter of Eleuthère Irénée duPont de Nemours and Sophie Madeleine Dalmas. By an act approved February 25, 1882, Congress provided that "the circle at the intersection of Massachusetts and Connecticut Avenues" in the city of Washington should be called DuPont Circle, and subsequently Congress appropriated $20,500 for the erection there of a bronze statue of the admiral which was modeled by Launt Thompson of New York and dedicated December 20, 1884. As described by his friend and companion in arms, Rear-Admiral Daniel Ammen, DuPont in appearance "was distinguished, graceful and urbane, with an intelligent expression and action," and few if any officers were of "more distinguished appearance or exalted character."

Henry Algernon Dupont was born at Eleutherian Mills, Newcastle County, Del., July 30, 1838, the son of Henry and Louisa (Gerhard) DuPont. He received his early education at private schools and at Dr. Lyons' boarding school near Philadelphia whither he was sent in 1853. Two years later he entered the University of Pennsylvania, but spent only a year there in the sophomore and junior classes, and on July 1, 1856, left the university to enter as a cadet in the United States Military Academy at West Point. Five years later, on May 6, 1861, he graduated at the head of his class, on the same day was commissioned second lieutenant of the corps of engineers, and on May 14, became first lieutenant of the 5th United States artillery, being promoted to adjutant July 6, 1861.

Immediately after his graduation he was sent south and from May 8 to July 1, served in the defences of Washington, D. C., on duty with Company D, 5th Pennsylvania volunteers. He then joined his own regiment at Harrisburg, Pa., where he served from July 2, 1861, to April 18, 1862, when he was transferred to Fort Hamilton, N. Y., as acting assistant adjutant general of troops in the harbor. In this post he continued until July 4, 1863, when he was detached from regimental headquarters and sent into active service in command of Light Battery B in the fields of Pennsylvania, Maryland, Virginia, and West Virginia. On March 24, 1864, he was promoted captain of the 5th United States Artillery, and in command of Light Battery B of that regiment during Siegel's campaign in the valley of Virginia he took part in the battle of New Market, May 15, 1864. Less than two weeks afterward he was appointed chief of artillery of the department of West Virginia, and during Hunter's campaign in Virginia against Lynchburg he commanded the artillery at the battle of Piedmont, June 5, 1864, at the engagement at Lexington June 11, the affair near Lynchburg, June 17, the battle of Lynchburg June 18, and the affairs at Liberty June 19 and Mason's Creek June 21. On July 28, 1864, he was appointed chief of artillery of the army of West Virginia and served in Sheridan's campaign in the valley of Virginia, commanding the artillery brigade of Crook's corps and participating in the affairs at Cedar Creek, August 12, and Halltown, August 23, 25, and 27, the action at Berryville September 3, the battle of Winchester (Opequan) September 19, the battle of Fisher's Hill, September 22, the affair at Cedar Creek, October 13 and the battle of Cedar Creek October 19, 1864. From January 1, 1865, until the close of the war he was chief of artillery of the department of West Virginia. For "gallant and meritorious conduct at the battles of Opequan and Fisher's Hill, Va." he was brevetted major in the regular army to date from September 19, 1864; for "distinguished services at the battle of Cedar Creek" he was brevetted lieutenant-colonel, U. S. A., to date from October 19, 1864; and was also awarded a medal of honor by Congress for "most distinguished gallantry and voluntary exposure to the enemy's fire at a critical moment" during the battle of Cedar Creek.

After the war DuPont continued in the army for a number of years. From June 29 to October 20. 1865, he was in command of Light Battery B of the 5th Artillery, stationed at Cumberland, Md.; from October 21 to 30, 1865, was in command of a battalion of the 5th Artillery at camp near Hampton, Va.; from October 31 to December 15, 1865, was in charge of the post at Fort Monroe, Va.; and from the latter date until October 27, 1866, was in command of Battery B, 5th Artillery. He was then transferred to Light Battery F, 5th Artillery, of which he was in command at Camp Williams, near Richmond, Va., until June 7, 1867, when he was ordered to the temporary command of Fort Monroe, Va. Though he was only at the last post for about four weeks it was sufficient in which to earn thanks for "his efficient services at Fortress Monroe" from Major-General John M. Schofield, then in command of the First Military District. DuPont rejoined his battery July 7, 1867, from which time until October 1, 1868, he commanded the post of Camp Williams and Battery F., but on October 7, 1868, he and his battery were transferred to Sedgwick Barracks, Washington, D. C., of which he remained in command until July 3, 1870. Battery F was then sent to Fort Adams, Newport, R. I., and DuPont was in command of it until January 16, 1873, and also had charge of the fort from July 28 to September 13, 1870 and from July 15, 1871 to May 17, 1872. He was a member of the board of officers which assimilated the tactics for the three branches of the service.

On March 1, 1875, Colonel DuPont resigned from the army and, after a year's absence in Europe, went back to live in Delaware. In 1877 he became a director and in 1878 the president and general manager of the Wilmington and Northern Railroad Company, then in very bad financial and physical condition. The task of putting the road into satisfactory shape seemed at first almost hopeless, but after 21 years of incessant labor he was at last successful. He retired from active business cares several years ago and has since devoted his spare moments to agricultural pursuits. In 1895 he came into na-

tional prominence again because of a deadlock in the Delaware legislature over the choice of a representative in the United States Senate. Mr. DuPont received 15 of the 30 votes cast, but he claimed that the speaker of the Delaware state senate, William T. Watson, who had succeeded to the office of governor upon the death of Governor Marvel, had no right to cast a ballot, in which event DuPont had a majority of one. He therefore contested the election and the committee on privileges and elections, after hearing a mass of testimony, reported on January 31, 1896, in his favor, but on May 15, 1896, the United States Senate by a majority of one declined to allow him to be seated. In the summer of 1897 President McKinley offered him the appointment of minister to Russia which he declined. The Republican majority of the Delaware legislature of 1899, and that of 1901 failed to elect a Senator although Colonel DuPont was voted for in each session, but he declined an election in 1903 when two Republicans were elected for the terms expiring March 3, 1905 and 1907 respectively. Again in 1905 there was a long deadlock and the legislature adjourned without electing a Senator, but on June 13, 1906, at a special session of the legislature Colonel DuPont was elected for the unexpired term beginning March 4. 1905, and took his seat in the Senate on December 3, 1906. In January, 1911, he was reelected for the term ending March 3, 1917.

Senator DuPont has published several contributions to the science of military tactics, among which are two volumes issued separately in 1875, entitled 'Cavalry Tactics U. S. A., Assimilated to the Tactics of Infantry and Artillery' and 'Artillery Tactics, U. S. A., Assimilated to the Tactics of Infantry and Cavalry.' He is a member of numerous organizations including the Historical Societies of New York, Pennsylvania and Delaware, the American Philosophical Society, the American Geographical Society, the Society of Colonial Wars, the Huguenot Society, the St. Nicholas Society and the Military Service Institute. On July 15, 1874, he was married to Mary Pauline Foster (daughter of Herman Ten Eyck and Mary Pauline (Lentilnon) Foster) and she died September 20, 1902. To them were born seven children: Catherine Barthelemie Pauline (b. April 2, 1875; d. March 5, 1876), Louise Evelina (b. August 3, 1877), Antoine Irénée (d. on date of birth, June 18, 1879), Henry Francis (b. May 27, 1880), Pierre Irénée (b. August 10, 1882; d. August 12, 1882), Paul Louis (b. August 10, 1882; d. March 7, 1883), Anna Victorine Sophie (b. June 23, 1885; d. February 26, 1886).

John North Willys

John North Willys was born at Canandaigua, N. Y., October 25, 1873, the only son among the three children of David Smith and Lydia Munson Willys. He is of English ancestry and the family first settled in this country about the year 1740. The early pioneers of the family always bore their share of the burdens of the country and two of his mother's ancestors served in the patriot army during the war of the Revolution. Mr. Willys' father, David Smith Willys, was a prosperous manufacturer of brick, tile and wood pulp boxes.

John N. Willys received his education in the high school at Canandaigua, N. Y., but before he had completed his studies in the high school saw an opportunity whereby he thought he could make a snug sum of money, and being of an energetic and businesslike nature he immediately grasped it. He left school when 15 years of age and purchased a half interest in a steam laundry at Seneca Falls, N. Y. He quickly showed his aptness and ability in business affairs and for a year conducted the laundry on a profit-paying basis, but at the end of that time he was offered a sum of money for the business much above what he had paid for it and he therefore sold it, then going back to school to finish his studies.

In 1892, having completed his education, Mr. Willys, then only 19 years of age, engaged in the bicycle business at Canandaigua which he continued to conduct until 1896 when he became a traveling representative of the Boston Woven Hose and Rubber Company, of Boston, Mass. Two years later, however, this firm failed and for the next ten years, from 1898 to 1908, Mr. Willys was president of the Elmira Arms Company, of Elmira, N. Y., who were also wholesale and retail dealers in athletic and outing goods and in addition wholesale and retail dealers in automobiles. From 1907 to 1910 Mr. Willys was president of the American Motor Car Sales Company of New York City; since 1908 has been president of the Overland Automobile Company of Indianapolis, Ind.; and since 1909 has been president of the Willys-Overland Company, of Toledo, Ohio, manufacturers of automobiles. In all his business connections Mr. Willys has displayed the same remarkable faculty for discerning profitable opportunities which distinguished his first entrance into the commercial world, and in each and every step in his rise to a prominent position in the realm of business he has shown wonderful ability and business acumen.

In the course of his career Mr. Willys has had occasion to visit all parts of the United States and has also traveled abroad extensively, having toured through England, Belgium, France, Germany, Switzerland, and Italy. He is a member of numerous commercial organizations, including the Business Men's Club of Toledo, and the Toledo Chamber of Commerce, of which he is also a trustee. In addition he is a member of several social, fraternal and

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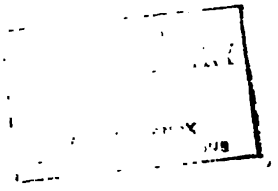

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John H Patterson

athletic associations, among which are Columbia Club of Indianapolis, Ind., and the Toledo Club, the Country Club and the Toledo Yacht Club of Toledo, Ohio. He has received all the degrees of Masonry up to and including the 32d, and is prominent in Masonic circles in that section of the country. Golfing is his chief recreation.

On December 1, 1897, Mr. Willys was married at Canandaigua to Isabel Irene Van Wie, daughter of Julian A. and Anna Clayton Van Wie, and to them on December 16, 1910, was born a daughter, Virginia Clayton. Mr. Willys maintains a beautiful home at 2210 Robinwood avenue, Toledo, and in it has a small but well selected collection of paintings, including 'Henner,' 'Roybet,' 'Pieters,' 'Knight,' 'Ziem,' 'Weiss,' etc.

John Henry Patterson

John Henry Patterson was born at Dayton, Ohio, December 13, 1844, one of the eight children of Jefferson Patterson, a farmer and legislator, and Julia Johnston Patterson. He is of Scotch-Irish descent and the first member of the family to settle in this country was his great-grandfather, John Patterson, who came here in 1728. His grandfather, Colonel Robert Patterson, served during the Revolution as an Indian fighter under George Rogers Clark, participating in ten engagements; he was the founder of Lexington, Ky., was one of the three original owners of Cincinnati, Ohio, and was one of the founders of Transylvania University. In 1804 Colonel Patterson removed to Dayton, Ohio, where he became the owner of 2,400 acres of land and where his grandson, John H., was born and later established the National cash register works. Mr. Patterson's mother was the daughter of Colonel John Johnston, Indian agent under the United States government at Piqua, Ohio.

Mr. Patterson and his brother Frank J. (1849-1901) passed their boyhood in farm labor on the old homestead near Dayton and received their early education in the Dayton schools. John H. attended Miami University in 1864-1865; in 1864 enlisted in the Hundred Day Men and served one summer in the 131st Ohio Volunteer Infantry in the Civil War; and afterward entered Dartmouth College whence he was graduated B.A. in the class of 1867. These two brothers created and operated for about five years the Southern Ohio Coal and Iron Company, sometimes making shipments of 100 cars per day from their mines in Jackson County, Ohio. This was in the few years preceding and following 1880. Like all coal miners of that day, this mining corporation had its «company store,» where hundreds of employees spent all their wages; and yet, with heavy sales year after year, the store business showed no clear net profit. John H. Patterson was by nature, temperament and training keenly alive to the commercial possibilities of new inventions and appliances and he was the first person in Dayton to put a telephone into business use. Being offered the newly invented Dayton cash register, then crude and imperfect, he bought it and put it into his store. The showing of increased profits was so astonishing that, on investigation, he determined to quit the mining business and engage in the manufacture of cash registers.

In April, 1882, he bought an interest in the National Manufacturing Company, which was making the early machine; in 1884 he and his brother bought practically the entire stock interest in this company and changed its name to The National Cash Register Company. One of their first moves was to acquire the Campbell patent No. 253,506, then existing only in the Patent Office and never having been put to practical use. This patent was also held to be a primary and fundamental one in the art (53 Fed. 367). After their varied and successful experiences as coal miners and dealers, these two men created the National cash register industry and have given it a world-wide renown which can be measured only by its final results. The cash register mechanism is one of Dayton's contributions to the inventions and utilities of the industrial world. Whatever has been accomplished in the development of the cash register has been done since 1882—that is, in about 30 years. There were no cash registers in commercial use before 1882; to-day there are 960,642 National cash registers in constant use throughout the civilized world. Of these, 129,066 were shipped from the Dayton factory in 1910; and about 40 per cent. of them were exported to foreign countries.

James S. Ritty, a Dayton business man, and John Ritty, a Dayton mechanic, took out their first patent covering invention in cash register mechanisms (No. 221,360) November 4, 1879. It was followed by the Ritty and Birch patent No. 271,363, issued January 30, 1883, which the Supreme Court of the United States afterward sustained (156 U. S. 502). This invention was the bridge between failure and success in the cash register industry.

Before this, on the continent of Europe and in this country, there had been a number of patents covering kindred cash register mechanisms and for the same use, none of which had been sold or could maintain themselves as practical working machines.

At a time when almost no one else in the world was working on or understood the subject, John H. Patterson and his brother Frank applied themselves with great assiduity and with a liberal expenditure of money to improving and widening the function and perfecting the mechanisms of the cash register. The Patterson brothers, working with their experimenters, took out in their own name 22 letters patent of the United States between the years

1886 and 1895. Some of the more important of these were the following:

No. 382,649, upon the five-cent devices, simplifying the registration of amounts that were odd multiples of five; No. 383,006 for check printing under keys, which covers a principle still in use in restaurants for printing amounts on order slips; No. 406,533, covering "color system" keys for charge, received on account, and paid out transactions, and counters to record the number of such transactions; No. 414,441, covering (a) the key arrester compelling the completion of a registration when once started; (b) the lid counter which shows the number of times the lid has been opened and enables the owner to tell whether or not the register has been tampered with. Both of these last-named inventions, after 20 years, are now in active use and on machines which are all over the world.

John H. Patterson now determined to put all the money he and his family possessed or could borrow into perfecting the cash register mechanism, and to devote his whole life to the work. Operating through The National Cash Register Company (for he always since has refused to connect himself with anything else) he found that mere invention and experimental work required an organized corps of experts and that it was essential that their results be continually tested out by salesmen in the field. Indeed, he found that it was his salesmen in the field, or, more correctly stated, the users of the machines, who alone could tell what invention or improvement was required, although they could not perfect it. On this idea he based his costly and elaborate complaint and suggestion system, which the company created and has continued to use. Up to January 1, 1885, the National company had so expended for inventions and experimenting, exclusive of any patents purchased from others, $7,713.70. This annual expenditure has continued and increased without cessation up to the present time, and latterly it has been as follows: 1905, $160,669.80; 1906, $203,207.86; 1907, $224,204.88; 1908, $260,994.64; 1909, $239,751.98; 1910, $181,236.35. In 1908, in pending litigation, it was proved that the National company maintained five experimental departments, employing a corps of skilled inventors, whose ideas were carried out by 103 skilled mechanics doing experimental work alone. The company's books and exhibits show that it has expended from the beginning up to the close of the fiscal year of December 31, 1910, for these purposes and exclusive of any invention or patent bought, the sum of $1,692,463.83.

Perhaps the claim of Mr. Patterson and his officers and advisers is true, that probably nine-tenths of such expenditure brings no final result and is hardly less than waste; but the other tenth brings invaluable invention and improvement, which are patented and have created the real utility and great commercial value of the cash register of to-day. With the aid of some inventions brought in or purchased from others, relating to these matters, but mainly by work done as above detailed, many good results have been brought about, among which are (a) the total adder; (b) the key coupler; (c) the register for English currency; (d) the check printer; (e) the key arrester; (f) the detail strip printer; (g) the throw-out counters; (h) the multiple drawers; (i) the department store register; and (j) electrically operated registers.

Intelligent criticism by those of the officers of the National Company who have been longest with it and are best informed about its inner workings, concedes that whatever is new or, indeed, of substance about any of its departments, has been in truth and fact the creation of John H. Patterson. His immediate personal labor in so doing has been continuous and greater than is often found at the head of any corporation. In earlier factory days, when its troubles were great, he moved his desk into the centre of the factory floor and took immediate personal supervision for more than a year, and gave his whole time to directing what he did not understand. But he did understand it before the end of this time, and is often found to understand it better than any person he can employ as factory subordinate. Of course, there are many new things in automatic and other special machinery which he has procured and used through skilled employees, and Mr. Patterson's sole credit in regard to them is his selection of competent subordinates.

The president of the National company organized its selling force; he early determined never to sell a register to a dealer but only to a user, and with trifling exceptions this rule has been adhered to all over the world. The result was to throw an enormous mass of detail and labor upon the company's headquarters, but it gave it an immediate and ready chance to hear criticism, approval, or complaint. To this end, he was probably the first person in the United States to organize a salesmen's training school, which has been one of the most successful and essential elements in the company's general success. In attempting to establish the business in London, Mr. Patterson personally did the labor which, at his best endeavors, was a total failure until he established in London a duplicate of his Dayton salesmen's training school. The managers of the business on the continent testify that attempts there to introduce the machines were altogether a failure until the salesmen went through his London school and learned his methods.

Perhaps Mr. Patterson was the first business man in this country to establish, and at very great expense, conventions of his salesmen, which have been a distinguishing feature of the methods employed by the company. It has been customary to place on blackboards before these men instructions and orders that the company was disposed to give and obtain their criticisms of such instructions before they were issued. From the start, the plan worked admirably. Often such proposed instructions were withheld or reversed or modified, and greatly to everybody's advantage. This same method was carried out locally by agents' conventions, and with like results. It seems to be an ingenious combination of the democratic and military systems by which the intelligence of the mass is permitted to give its true expression and to have a due weight in the management, and yet when the order is given, it is final and to be obeyed as much as a military order by all subordinates. Some of the most

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Edward E. Robbins

interesting experiences remembered in the National's business have been when Mr. Patterson would face the foreman of his factory with the leading salesmen who had been brought together in convention and they would explain and criticise and correct each other. In this way, they have been taught to appreciate each other.

Mr. Patterson established the system of making and publishing a quota, which is the amount of business expected of each agent during the current month. This is not kept secret but published with the actual amount obtained by each, and laid weekly before the company's selling agents all over the world, who thus know, stimulate, applaud and criticise each other. In January, 1911, there was held at the factory in Dayton a convention of 188 sales agents who had made in the year then ending the required highest standard of their established quotas. They were a week in session and all their expenses in travel and entertainment at the company's headquarters were paid by the company itself; and they came from nearly every state in the Union.

By these and other unique and original methods, the company has brought about an organization and a trained expert force in salesmanship, perhaps unequalled in the United States. These methods have been successfully put into use in every foreign country where the company's agencies are, and have brought about everywhere actual and practical success and progress.

At the main factory in Dayton, the National company now employs 5,500 workmen, and has branch factories in Toronto, Canada, and Berlin, Germany. The Dayton factory covers 36 acres of floor space in 15 buildings on a manufacturing property occupying 140 acres of ground. It is a part of the old Patterson homestead farm, which never was deeded by any man but was originally patented by the United States to John H. Patterson's grandfather. The factory invites and is open to visitors at any time; perhaps 40,000 people on an average each year now visit the plant.

The efforts of John H. Patterson, which have been permanent and successful in improving factory conditions, and the welfare of workmen, have been an incentive to others in the United States and perhaps have brought him greater reputation abroad than at home. It was in acknowledgment of his accomplishments in this direction that the government of France gave him its decoration of chevalier of the Legion of Honor.

Mr. Patterson has traversed every portion of the United States, has made many trips abroad, and has also encircled the globe. His favorite recreation is horseback riding. He is a member of the advisory council of the National League for Social Service, the National Association of Manufacturers, the National Association for Foreign Commerce, the National Association for the Promotion of Industrial Education, and the Dartmouth Club. On December 18, 1888, he was married at Brookline, Mass., to Katherine Beck, daughter of Frederick and Lucy Doane Beck, and to them have been born one son: Frederick Beck, and one daughter: Dorothy Foster.

Edward Everett Robbins

Edward Everett Robbins was born at Robbins' Station, Westmoreland Co., Pa., Sept. 27, 1862, one of the seven children of Joseph and Rachel G. Robbins. He is descended from an old English family, one of the members of which, John Robbins, in 1638 determined to cast in his lot with the pioneers then carving out settlements from the primeval forests of the New England territory. He thus became the founder of the Robbins family in America and ever since that time the family has done yeoman work in the service of the country. Several of Mr. Robbins' ancestors participated in King Phillip's War and his great grandfather, Brintnal Robbins, served as an ensign during the Revolutionary War, being a member of Captain Samuel Robbins' company and of the 21st regiment of Connecticut volunteers. He was engaged in the battles of Concord and White Plains, served under Sullivan and Greene at the siege of Rhode Island by General Pigott in 1778 and also aided in driving the British from the vicinity of New London after the latter had committed numerous depredations along the coast. He subsequently became a farmer and later a shipbuilder, constructing the boats that during the War of 1812 conducted Scott's troops across the Niagara into Canada.

Edward E. Robbins was reared on a farm until he was 12 years of age and during this time attended the public schools of the vicinity, but in 1872 he entered Elders Ridge Academy, a famous old Presbyterian school near Indiana, Pa. He then attended the State Normal School at Indiana, later entered Washington and Jefferson College from which he was graduated in 1881, and then took a course in law at the Columbia Law School, New York City, graduating from the latter institution in 1883. On April 8, 1884, he was admitted to the bar of Westmoreland County, Pa., and soon became widely known for the careful and successful manner in which he conducted the cases assigned him. This resulted in the acquiring of a large law practice and also brought him a large amount of corporation work. In 1890 he was appointed attorney and solicitor for the Baltimore and Ohio Railroad in Westmoreland County and in 1898 attorney and general counsel for the Ligonier Valley Railroad. He is general counsel for the Pittsburg-Westmoreland

Coal Company and president of the Atlantic Coal Company. In 1895 he organized and became a director of the Greensburg Safe Deposit and Trust Company of Greensburg, Pa.; in 1902 he organized and became a director in the Wilmerding National Bank; and he is a director in a number of other corporations.

In 1888 Mr. Robbins entered the Pennsylvania national guard as a private, later became lieutenant and regimental quartermaster and from 1900 to 1904 was quartermaster-general with rank of colonel. On May 15, 1898, shortly after the declaration of war with Spain, he enlisted in the army and was commissioned by President McKinley a captain and quartermaster, being assigned to the first corps, third division, first brigade under General John A. Wiley, and ordered to Camp Thomas, Georgia. He was then detailed to special duty under the chief quartermaster Colonel J. G. C. Lee, and placed in charge of loading and shipping troops to the front—a duty for which he had been perfectly fitted by his long experience in handling large bodies of troops in Pennsylvania. The efficient manner in which he discharged these duties brought him a well-deserved promotion. On August 21, 1898, he was made major and chief quartermaster, placed in charge of the transport Seneca and ordered to sail with troops and supplies to Santiago. He afterward conducted Admiral Schley, General Gordon and Colonel Beacon as commissioners to Porto Rico and while there he visited San Juan and Ponce and served in Porto Rico under General Miles.

In addition to his law practice and military service Mr. Robbins has held several political offices. From 1886 to 1888 he was chairman of the Republican county committee of Westmoreland County, Pa.; in 1886 was nominated for district attorney; from 1888 to 1892 was a member of the Pennsylvania state senate, and from 1897 to 1899 during the 55th Congress represented his district (the 21st) in the national House of Representatives. While in the state senate he was active in promoting school legislation and was largely instrumental in securing free text-books and compulsory education. He is affiliated with the Presbyterian church and for 12 years was a trustee in the church and is now president of the board of trustees of the First Presbyterian Church of Greensburg, Pa. He was a charter member of the local branch of the Benevolent Protective Order of Elks and was one of the organizers of the Greensburg Country Club which now owns a farm, a fine club house and an excellent golf course. He is also a member of the Duquesne, the University, Americus and Republican clubs of Pittsburg, and the Grand Fraternity of Heptasophs. In 1881 Washington and Jefferson College and in 1888 Columbia conferred upon him the degree of A. B.

Mr. Robbins has visited many portions of the world. After his graduation from law school he traveled in the southern and western sections of the United States and also in Cuba and Central America; in 1906 he visited the Panama Canal Zone; in 1908 toured Canada and the northwest; in 1909 again visited the south; and in 1910 traversed a large portion of Europe. His principal recreations are golf and tennis and he also rides horseback and drives an automobile. He is deeply interested in literature of every nature and in addition to his law library he has a large private library showing taste, culture and refinement in the selection of books. On December 17, 1896, he was married at Greensburg, Pa., to Louise S. Moore, daughter of the late J. W. Moore and Elizabeth S. Moore, and to them have been born two children: Edward E., Jr. (b. December 4, 1898), and William M. (b. May 26, 1901).

Bion Joseph Arnold

Bion Joseph Arnold was born at Casnovia, Michigan, August 14, 1861, the oldest of the ten children of Joseph and Geraldine (Reynolds) Arnold. He is of English-Scotch-Irish descent and his ancestors were among the early pioneers in Rhode Island, the first member of the family of whom there is any record being Jeremiah Arnold, who was born at Smithfield, R. I., in 1700. He was followed by Jeremiah Arnold, 2d, Ichabod Arnold, Jeremiah Arnold, 3d, and Joseph Arnold, father of Bion. One of his ancestors on the paternal side, Jeremiah Arnold, 2d (b. 1725), fought with the colonists throughout the French and Indian War. However, as he had taken the oath of allegiance to Great Britain at that time, he refused to violate his oath by joining the colonies in their revolt against the mother country, although he did not take up arms in the royal cause. He, therefore, became one of the large body of American loyalists who remained steadfast to what they considered right, and in consequence, with the others, suffered the confiscation of his property. Another ancestor on the paternal side, Joseph Rounds, at the age of 16 enlisted in the Revolutionary ranks from Rhode Island and fought throughout the war. A maternal ancestor, Edward Rawson, was secretary of the Massachusetts Bay Colony from 1651 to 1686. In 1864 when Bion was three years of age his parents moved to Ashland, Nebraska, and in that state his father became a prominent lawyer and a member of the territorial legislature in 1865-66, which framed the state constitution just prior to its admission to the Union.

The young man received his early education in the public schools of Ashland, and in 1879 began a course in engineering at the University of Nebraska, but after a year of study at this institution he left to enter the scientific course at Hillsdale College, Michigan. In 1884 he was graduated from Hillsdale with the degree

of B.S., taking a mathematical prize for a six years' course; in 1887 he received the degree of M.S., and in 1889 the degree of M.Ph. was conferred upon him by the same institution for engineering work done subsequent to graduation. He took a post-graduate course in electrical engineering at Cornell University during 1888-1889, and in 1897 the University of Nebraska conferred upon him the degree of E.E. Since that time he has received many rewards for merit, such as the honorary degree of Sc.D. from Armour Institute of Chicago in June, 1907; a gold medal from the Trans-Mississippi Exposition at Omaha in 1898 for engineering designs, and in 1903 an engrossed Diploma Extraordinary from Hillsdale College in recognition of his "distinguished learning and achievement in invention and in mechanical and electrical engineering." On January 18, 1911, the University of Nebraska conferred upon him the honorary degree of Doctor of Engineering.

Mr. Arnold's father had hoped that the young man would follow the legal profession, but the boy's natural inclination toward mechanical work eventually determined his course. When only six years of age he had begun to fashion small boats, sleds and models of farm implements from the crude material at hand; when 12 years old he had built a steam engine, devising and using the common piston valve before he had seen it elsewhere; at 14 he had constructed a bicycle without ever having seen one and only following a small advertising cut in the 'Youth' Companion'; and when 18 years of age, while attending the University of Nebraska, he built a small railroad locomotive, one-sixteenth of full size, a complete operating engine in every respect. In his youth Mr. Arnold acquired much skill in handling machinery, and while in college he spent his vacations traveling as an engine expert for engine building companies and in the field with civil engineering parties, which stood him in good stead in later years.

Immediately after graduating in 1884, in order to gain business experience, Mr. Arnold became general agent for the Upton Manufacturing Company, of Port Huron, Michigan, builders of traction engines. Two years later he became a draftsman for the Edward P. Allis Company of Milwaukee, leaving the employ of that company to accept the position of chief designer for the Iowa Iron Works of Dubuque, while in that position designing and building numerous steam engines and much other heavy machinery. In 1887 he resigned this position to become a civil engineer for the Chicago, St. Paul and Kansas City Railway Company, which was then under construction (now the Chicago Great Western), and when the road was turned over to the operating department he continued with the company as mechanical engineer, re-designing some of its locomotives and drawing designs for new equipment. He now desired to broaden his education and experience in the engineering field and decided to make a particular study of electricity, for which purpose he resigned in 1888 from the Chicago Great Western and entered into a course of study at Cornell University.

On leaving Cornell he entered the service of the Thomson-Houston Electric Company, taking charge of its St. Louis office as engineer and agent, but two years later he went to the Chicago office of the same company as consulting engineer and continued to hold that position after the consolidation of the Thomson-Houston and Edison General Electric Companies into the General Electric Company. While with this company he also acted in the capacity of consulting engineer to the Intramural Railway Company, which built the elevated railroad at the Worlds Fair in Chicago in 1893, the forerunner of the present electric elevated road. Mr. Arnold then determined to establish himself as an independent consulting electrical engineer and since 1893, when he opened an office in Chicago, he has devoted his attention chiefly to the design and construction of electric properties throughout the United States and Canada, and to the perfection of inventions and improvements which have greatly enhanced his reputation.

One of his first undertakings as an independent engineer was the construction of the St. Charles Street railway in New Orleans, La., and with each new undertaking he has innovated many distinct improvements and advances. Mr. Arnold had been long impressed with the great value of the storage battery in connection with electric traction work; he encouraged its development, recommended its use, wherever advisable; and proved his faith in it by investing a large amount of capital in its manufacture. His investment not only proved a success but he has had the satisfaction of seeing his views generally adopted. In equipping the Chicago and Milwaukee Electric Railway he advised the adoption of the substation rotary converter storage battery system using high tension alternating current for power transmission, and to demonstrate the merits of the system and overcome all objections he contracted to build and equip the road himself, guaranteeing the efficiency and operation of the system when complete. The experiment proved a success, great economy being effected in first cost and operating expense over any method then in vogue and the system has become the standard type of construction for interurban electric roads.

In 1901 the New York Central Railroad Company commissioned Mr. Arnold to study and report upon the advisability and feasibility of electrically operating its trains in and out of New York. Upon his recommendation the road decided to make the change and for the next five years Arnold was a member of the commission in charge of electrifying over 300 miles of track and the complicated terminal at New York,—changes that involved an expenditure of over $60,000,000.

In 1902 he was commissioned by the city of Chicago to make a study of its transportation system with a view to bettering it, and within four months he had presented a 300-page report embodying an analysis of conditions as they were and his recommendations for improvements. Mr. Arnold's report contained many radical recommendations, many of which have since been adopted, and the solution of the Chicago traction problem, in the winter of 1906-07, was largely due to Mr. Arnold's broad engineering experience and knowledge of the most modern development of railroading. Un-

der the traction ordinances of February 11, 1907, Mr. Arnold was made Chairman of the Board of Supervising Engineers created by the ordinances, and Chief Engineer of the Work of Rehabilitation, which work has resulted in the judicious expenditure, under the direction of this Board, of some $60,000,000, resulting in an efficient traction service and great financial gain to the city and the companies. He has also recently submitted to the Chicago City Council complete plans for a comprehensive subway system for the city.

In connection with this study of railway problems Mr. Arnold has invented many valuable devices. He has also achieved a brilliant success in his development of single phase electric traction, for several years having conducted experiments, at large expense to himself, with an electro-pneumatic system of his own invention. His work in this line gave a great impetus to the development of the single phase railway motor, as his experiments proved that the cost of operating electric roads could be greatly reduced by its installation. Its superiority has been generally recognized and the system is being adopted by a number of roads, such as the Grand Trunk Railway for the St. Clair tunnel connecting Port Huron, Michigan, and Sarnia, Ontario, and by the New York, New Haven and Hartford Railroad Company, in operation between New York City and Stamford, Conn.

In 1908 the Public Service Commission of the State of New York for the district of New York City retained Mr. Arnold as consulting engineer to simplify and perfect the operation of the railway system of the Interborough Rapid Transit Company and to recommend plans for the construction of future subways, and he is still acting in this capacity. He acted as director of valuations for the same Commission, in valuing the street railway properties of New York and Brooklyn.

Mr. Arnold has recently completed a careful study and submitted an exhaustive and valuable report to Mayor Magee of Pittsburg upon the transportation problem of that city. He is at present engaged in a study of the same problems for the cities of Providence, Rhode Island, and Los Angeles, California. Mr. Arnold has also acted as consulting engineer for various other commissions, municipalities and corporations throughout the United States and Canada.

Mr. Arnold is president of The Arnold Company, Engineers-Constructors, which company has been very successful in designing electric railway and power properties. He is also a director in the Elgin and Belvidere Electric Company of Illinois.

Mr. Arnold has been a careful student and an earnest investigator of electrical phenomena and his ability as an electrical engineer and his talent for mechanical construction have placed him at the head of his profession, he being regarded as one of the greatest advocates of and most successful pioneers in the creation and adoption of new and progressive ideas in connection with electric traction. He has not, however, selfishly retained his great knowledge. He has not only enriched technical literature by his contributions but has also given courses of lectures in engineering subjects to young students and beginners. He has contributed extensively to the discussions of the society to which he belongs and is the author of several treatises, of which the most noteworthy is probably 'The Chicago Transportation Problem' (1902), constituting the report to the city authorities before mentioned and considered an authority on traction matters. He has delivered special lectures before the engineering students of the universities of Illinois, Michigan, Purdue and Cornell, and in 1897 delivered a course of ten lectures at the University of Nebraska on 'The Design and Construction of Electric Power Plants.'

In 1900 Mr. Arnold was a delegate to the International Electrical Congress at the Paris Exposition, representing the American Institute of Electrical Engineers, and while abroad he visited the principal electrical works and installations in Great Britain and on the continent, spending the entire summer in studying European practice. In 1904 he was vice-president and chairman of the executive committee of the International Electrical Congress of St. Louis. He is a member of the American Institute of Electrical Engineers, of which he was president in 1903-04; the Western Society of Engineers, of which he is a trustee, and was president in 1906-07; the American Society of Civil Engineers, the American Association for the Advancement of Science, and the American Society for the Promotion of Engineering Education.

While not a club man Mr. Arnold enjoys the pleasure to be derived from such associations, and belongs to several organizations, such as the Union League, Mid-Day, Engineers', Automobile, Kenwood and South Shore Country clubs of Chicago, and the Engineers' and Transportation clubs of New York. He is also a trustee of Hillsdale College and was president of the Chicago-Cornell Association. He is fond of automobiling, golf, the theatre, etc., is much interested in aeronautics, and has traveled extensively in this country, Europe and Alaska. He has been twice married: first on January 14, 1886, to Carrie Estelle, daughter of Henry Berry of Reading, Michigan, who died at Colorado Springs, February 1, 1907; and secondly at New York, December 22, 1909 to Mrs. Margaret Latimer Fonda, daughter of George L. Latimer of Nova Scotia. Surviving his first wife are two sons: Stanley Berry and Robert Melville Arnold, and one daughter Maude Lucille, who was married at Chicago to Hartley Le Roy Moss, February 9, 1910.

Simon Peter Wolverton

Simon Peter Wolverton was born at Rush township, Northumberland County, Pa., January 28, 1837, and died at Sunbury, Pa., October 25, 1910. He was the son of Joseph and Charity Wolverton. He received his early education in the district school, which he attended until he was 17 years of age, during the summer months working on his father's farm. He then taught school for a term and later studied at Danville Academy preparatory to entering college. In the spring of 1857 he entered Lewisburg (now Bucknell) University as a member of the freshman class, but at the end of the sophomore year his funds had run so low that he was compelled to leave college. He then began the study of law, during this time supporting himself by teaching at Danville, Pa., but he became more and more impressed with the meagreness of his education and also of the great necessity for a higher course and he therefore returned to Lewisburg at the beginning of the senior year of his class. Working indefatigably he succeeded in completing the two years' work in one (the junior and senior) and in 1860 he was graduated with the degree of A.B., securing second honors over those who had attended the course continuously during the entire four years.

After his graduation Mr. Wolverton accepted the position of principal of Sunbury Academy, Sunbury, Pa., and while conducting the affairs of this institution also studied law under Alexander Jordan, then presiding judge of the district comprising Northumberland and adjoining counties. In April, 1862, he was admitted to the bar at Sunbury, and continued to practice there until his death. Not six months after he was admitted to the bar Governor Curtin issued an emergency call for troops and in September, 1862, Mr. Wolverton raised a company of volunteers, commanding it as captain after it had been attached to the 18th Pennsylvania regiment. In June, 1863, he was transferred to the command of Company F of the 36th Pennsylvania regiment and served with it in repelling the invasion of Pennsylvania by the Confederates under General Robert E. Lee.

After his term of enlistment had expired Mr. Wolverton returned home and resumed the practice of his profession, from the first attaining success and subsequently becoming one of the most prominent practitioners in the state. He soon became counsel for the Lehigh Valley Railroad and Coal Companies, the Philadelphia and Reading Railroad and Coal and Iron Companies, Coxe Brothers and Company and numerous other large corporations and he appeared in many important cases. He was largely instrumental in securing the construction of the Danville, Hazelton and Wilkesbarre railroad from Hazelton to Sunbury and also aided in organizing the Shamokin, Sunbury and Lewisburg Railroad Company, of which he was president until it was merged with the Philadelphia and Reading as part of the main line of the latter to Williamsport. Mr. Wolverton was also a powerful factor in the construction of the electric road between Sunbury and Northumberland.

Mr. Wolverton was deeply interested in the political affairs of the state. In November, 1878, he was sent to the upper house of the legislature to fill a vacancy and continued as a member of that body until 1888, having been twice re-elected—in 1880 and 1884 for the full four-year terms. His election is all the more indicative of the high esteem in which he was held because though a Democrat by conviction the district which he represented was always strongly Republican and his election took place at the same time as the presidential and state elections. In the legislature he introduced many important bills, always took a prominent part in shaping the legislation so as to be absolutely constitutional, and served as a member of the judiciary committee. In 1887 he was the candidate of his party for president of the senate and also received the nomination for the office of United States senator, but was defeated. In 1890 he was nominated for membership in the national House of Representatives from the 17th district and was elected to the fifty-second Congress by a large majority. He was re-elected to the fifty-third Congress in 1892, but after this term had expired declined a renomination. While in Congress he was a member of the judiciary committee. After his retirement from political life he devoted himself to his law practice.

Lewis Harris Kittredge

Lewis Harris Kittredge was born at Harrisville, N. H., June 18, 1871, the only son of the two children of Samuel Grant Kittredge, a well-known merchant, and Louise Harriet (Harris) Kittredge. He is of English ancestry, the first member of the family to arrive in this country being John Kittredge, who came here in 1660. The early education of Lewis Kittredge was obtained in the high school at Keene, N. H., and in 1892 he entered the New Hampshire State College at Durham, N. H., from which institution he was graduated in 1896 with the degree of B.S. Having completed his education he immediately entered business life, first accepting employment in the Passaic (N. J.) factory of the New York Belting and Pack-

ing Company, with whom he remained during the years 1896 and 1897. In the latter year he resigned his position with the New York Belting and Packing Company to go to Cleveland, where he associated himself with the Peerless Manufacturing Company, makers of automobile parts. Bending all his energies to the efficient performance of his duties he soon demonstrated his great capabilities and within two years had been appointed secretary and general manager of the company, two years later, in 1901, the office of treasurer being added to his duties. In 1902 the firm changed its name and it was incorporated under the title of the Peerless Motor Car Company. Two years later, in 1904, Mr. Kittredge was elected vice-president of the company and in 1906 was elected to the presidency. He is also president of the Peerless Motor Car Company of New York and of the Peerless Motor Car Company of New England, is secretary of the Association of Licensed Automobile Manufacturers, and is interested in several other corporations.

Considering the fact that the history of the Peerless Motor Car Company covers scarcely more than a decade, its growth may be considered phenomenal, and from a very modest beginning it has gradually and consistently advanced until it is now one of the leading companies engaged in the manufacture of automobiles. The original factory was a small building in Cleveland which gave the company a floor space of only 10,000 square feet, and the machinery with which the shops were then equipped was originally intended for an entirely different use, so that at the present time only one machine tool that was in the first factory is being used. In 1900 the company began the manufacture of automobile parts, and two years later, when the company was incorporated under the name of the Peerless Motor Car Company, the manufacture of complete motor cars was started. The increased business, however, demanded more extended facilities for manufacturing purposes and in 1904 a new factory was erected and since that time hardly a year has passed but has witnessed the erection of a new building or shop, until at the present time the land upon which the buildings are situated comprises six acres and the buildings have a total floor area of over eight and one-half acres. The latest group of buildings consists of three factory buildings, each three stories in height, with a handsome four-story office building.

In connection with the erection of new buildings the working force of the company was entirely reorganized, and able and progressive men placed in charge of the various departments, with the result that, as all were imbued with a desire to improve and perfect the product and increase the sales of the company, they have worked together as a harmonious whole toward that end. While the superior officers have always demanded the best from those under them they have been ever ready to recognize worth and merit and have rapidly promoted such as proved themselves competent and capable. Thus a wonderfully efficient and loyal working force has been brought together. This policy of promoting those who exhibit talent in their line has, in connection with the excellent qualities of the car itself, tended not only to raise the standard in the making of the car, but has also inspired everyone with a desire to increase the company's sales which is most forcibly attested by the steady demand for the car and continuous growth of the business. The company has always endeavored to make the Peerless car «all that the name implies» and has eagerly sought for suggestions to improve the mechanism and appearance, sparing no expense to incorporate such suggestions where they were considered desirable and advantageous. In the development of this policy of conducting the business Mr. Kittredge has played no small or minor part and to his indefatigable efforts, capable management and great executive ability may be attributed a large portion of the success of the company.

Mr. Kittredge has traveled extensively in various sections of the world; he has visited every portion of the United States and has seen much of England, France, Germany, Belgium, Italy and Switzerland. Golf is his chief recreation. He is a member of the Union, Euclid, Clifton, Mayfield Country, Cleveland Athletic and Cleveland Automobile clubs of Cleveland, and the Automobile Club of America of New York City, and is also a member of Unity Church. On November 8, 1902, he was married at Cleveland, Ohio, to Josephine Adelaide Mason, daughter of James Ogilbie and Frances Cleland Mason, and to them have been born two children: Annie (b. November 14, 1903), and Lewis Harris, Jr. (b. June 25, 1907).

Edward Ford

Edward Ford was born at Greenville, Indiana, January 21, 1843, the son of John Baptiste and Mary (Bower) Ford, his father being of French extraction and his mother a descendant of the Pennsylvania Dutch. The first of the Ford family to emigrate to this country was Jeane Baptiste, who settled in Kentucky in the latter part of the 18th century—about 1770. Mr. Ford's father, John B. Ford, was the first manufacturer of plate-glass in America and was the promoter of what is now the Pittsburg Plate Glass Company, the largest concern of its kind in the United States.

The elementary education of Edward Ford was obtained in the public schools of New Albany and Greenville, Indiana, and later he spent a short time in the Bryant and Stratton Commercial College at Indianapolis. Entering business life, he was first employed as a clerk on an Ohio River steamboat in which position

Edward Ford

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he remained for ten years, but at the end of that time, 1871, he secured a position as bookkeeper with the Star Glass Company, manufacturers of window glass, at New Albany. During the next ten years he gave his best efforts to the performance of his duties and was gradually promoted from one position to another until he had become manager. In 1881 he moved to Creighton, Pa., and started the first works of the Pittsburg Plate Glass Company at that place. He continued with the latter company until 1897 and when he retired from its employ had for several years most ably and efficiently occupied the highest position in the service of the company—the presidency. During his administration as head of the company's affairs four of the largest plants operated by the company were erected.

Upon leaving the Pittsburg Plate Glass Company, Mr. Ford organized the Edward Ford Plate Glass Company. In August, 1898, he moved to Toledo, Ohio, and purchased the land and began the construction of the plant which under Mr. Ford's wise guidance has grown to be the largest individual plate glass manufacturing plant in the world, giving employment to thousands of persons. Operations were begun in a small way in November, 1899, but so successful were Mr. Ford's business methods that the plant was soon running up to full capacity and has continued so ever since. Mr. Ford was better able to conduct the business because of his broad knowledge of the intricacies of the business and his experience in the technical branch of manufacturing.

In addition to his duties in connection with the above company Mr Ford is also president of the Michigan Alkali Company of Wyandotte, Michigan, director of the J. B. Ford Company of the same place, manufacturers of chemicals, director of the First National Bank of Detroit, director of the Second National Bank of Toledo, and was a director of the T. and O. C. Railroad, having resigned from that position. He is also the owner of the Ford Building in Detroit, which is one of the finest and most substantial and imposing structures in the United States. He has always been interested in political affairs and in 1870-72, while a resident of New Albany, Indiana, was a member of the common council of the city, but since that time he has refused to accept any political office.

Mr. Ford has traveled extensively both at home and abroad. His favorite recreations are yachting, motoring and fishing. He also enjoys social life, is a Mason and an Odd Fellow, and a member of the Duquesne Club of Pittsburg, the Toledo Club of Toledo, the Middle Bass Club of Lake Erie, and several country clubs, including the Country Club of Toledo. Mr. Ford has been married twice. In 1864 he was married to Evelyn C. Penn, of New Orleans, and to this union were born two children: Mrs. Mary F. Bacon, of Wyandotte, Mich., and John B. Ford, Jr., of Detroit. Mrs. Ford passed away in 1874 and two years later Mr. Ford was again married, to Carrie J. Ross of Zanesville, Ohio. By his second wife Mr. Ford has had three children: Mrs. Laura Ford MacNichol, Mrs. Edna Ford Knight, and George R. Ford, of Toledo. He has a beautiful residence in the most fashionable district of Toledo and has expended much time, thought and money in its furnishings and decorations, the home containing extensive art, book and statuary collections, which indicate that Mr. Ford has the discriminating eye of the connoisseur.

William Henry Barnes

William Henry Barnes was born at Philadelphia, Pa., July 12, 1829, the son of Henry Barnes of Marlborough, Mass., and Marilla (Weldon) Barnes, of New Britain, Conn. He was educated at private schools and immediately after completing his education engaged in business. From 1848 to 1856 he served on surveys and construction of the western division of the Pennsylvania Railroad. In 1856 he became assistant superintendent, then secretary and later comptroller of the Pittsburgh, Fort Wayne and Chicago Railway, in which capacity he served until 1863. From 1863 to 1871 Mr. Barnes was in the service of the Union Railroad and Transportation Company and the Empire Transportation Company. In 1871 he became a director and treasurer of the Pennsylvania Company, serving until 1883.

The able manner in which he had handled the affairs connected with these large enterprises brought Mr. Barnes the appointment to the receivership of the Allegheny Valley Railroad Company and he capably filled this position for eight years, from 1884 to 1892. Upon the then reorganization of this road as the Allegheny Valley Railway Company, Mr. Barnes was elected president. He resigned April 5, 1909. He was also president of the Western New York and Pennsylvania Railway Company from January 14, 1901, until April 5, 1909, when he resigned. He is a director of the Pennsylvania Railroad Company, Pennsylvania Company, Pittsburgh, Cincinnati, Chicago and St. Louis Railway Company and allied corporations.

On October 27, 1857, he was married to Eva Hampton, daughter of the Hon. Moses Hampton, at Allegheny City, Pennsylvania.

Hervey Bates, Jr.

Hervey Bates, Jr., was born at Indianapolis, Indiana, October 1, 1858, the only son of the two children of Hervey and Charlotte (Cathcart) Bates. On the paternal side he is of English extraction. His mother was born at Philadelphia, Pa., of Scotch parents whose native home was Ayr, Scotland. The Bates family was founded in this country by David Bates. One of the ancestors of Mr. Bates fought in the patriot army during the Revolutionary War. His grandfather was born at Cincinnati in 1794 and lived there for many years. His father was a major in the Union army during the Civil War, subsequently becoming a prosperous wholesale grocer and banker.

The boy began his schooling in the public schools of Indianapolis; for two years he studied at Riverview Academy, Poughkeepsie, N. Y., and subsequently entered Phillips Exeter Academy at Exeter, N. H., whence he was graduated in 1878, when 20 years of age. After graduating from the last-named institution he entered Harvard College to pursue the scientific and technical course. Owing to the disastrous panic which swept the country he was compelled to leave college at the end of his freshman year that he might enter business life.

On leaving Harvard the young man returned to Indianapolis, immediately engaging in the machine trade as an employee of the Atlas Engine Works. There he labored for the following six years, the first four of which were spent as an apprentice. He was promoted first to journeyman machinist and then became head of the trade desk. At the end of the sixth year of service with the Atlas works he left its employ and purchased the Indianapolis Hominy Mills. He was business manager and secretary and treasurer of the corporation. His chief concern was the mechanical department for the development of which he was well fitted by his training as a practical machinist. In 1892, when the American Hominy Company was formed by combination of ten plants, he was elected president of the company, and he has continued to serve in that capacity ever since. Mr. Bates is also director of the Fletcher American National Bank of Indianapolis and a director of the Remy Electric Company. At the outbreak of the Spanish American War he also took and passed the examination for engineer in the navy.

He belongs to the Columbia Country and University clubs and the "German House" and is a 32d degree Mason and a shriner. He is also a member of the Board of Trade and attends the Presbyterian church. He has traveled extensively and his chief recreation is shooting. On December 30, 1884, he was married at Indianapolis to Susan Martindale, daughter of Judge E. B. Martindale, of English descent, and to them has been born one son: Hervey (b. July 9, 1896).

William Delavan Baldwin

William Delavan Baldwin was born at Auburn, Cayuga County, N. Y., September 5, 1856, the only son of the two children of Lovewell Hurd and Sarah Jane (Munson) Baldwin. He was educated in the public schools and the high school of Auburn, N. Y., and in 1871 entered the employ of D. M. Osborne and Company, of Auburn, manufacturers of harvesting machinery, in which position he remained for the following six years. In 1877 he went to Europe as manager of the European branch of this firm and continued in that capacity until 1882 when he resigned. Returning home he became a stockholder and treasurer in the firm of Otis Brothers and Company, elevator builders, and in 1898 he organized the Otis Elevator Company of which he has since been president. Mr. Baldwin is also president of the Gravity Conveyor Company, a director in the Lincoln Trust Company, the Home Insurance Company, the National Surety Company, the New Endicott Company and the Sundh Electric Company and a member of the Chamber of Commerce.

The history of the Otis elevator dates back to 1853 when Elisha Graves Otis began building hand-power elevators in a small shop at Yonkers, N. Y., this being the nucleus of the Otis Elevator Company. Later Mr. Otis built steam elevators and then hydraulic elevators, and at the World's Fair Crystal Palace Exhibition in New York City showed the first safety device to be applied to elevators. This marked the beginning of elevators as passenger carriers, and since that time the safety appliances have been much improved in order to meet the increasing demand for passenger elevators in our present lofty buildings. In the early nineties, when electricity was fast becoming generally used as the source of power, the electric elevator was developed. One of the first installations of an electric elevator was in the A. T. Demarest Building, 335 Fifth Avenue, New York City, and it is still in operation. The increasing height of buildings and the speed at which it was necessary for the machines to run compelled the construction of a different type of elevators and the ingenuity of the experts of the company brought forth the traction elevator, which has enabled builders to erect the towering office-buildings of to-day throughout

W. D. Baldwin

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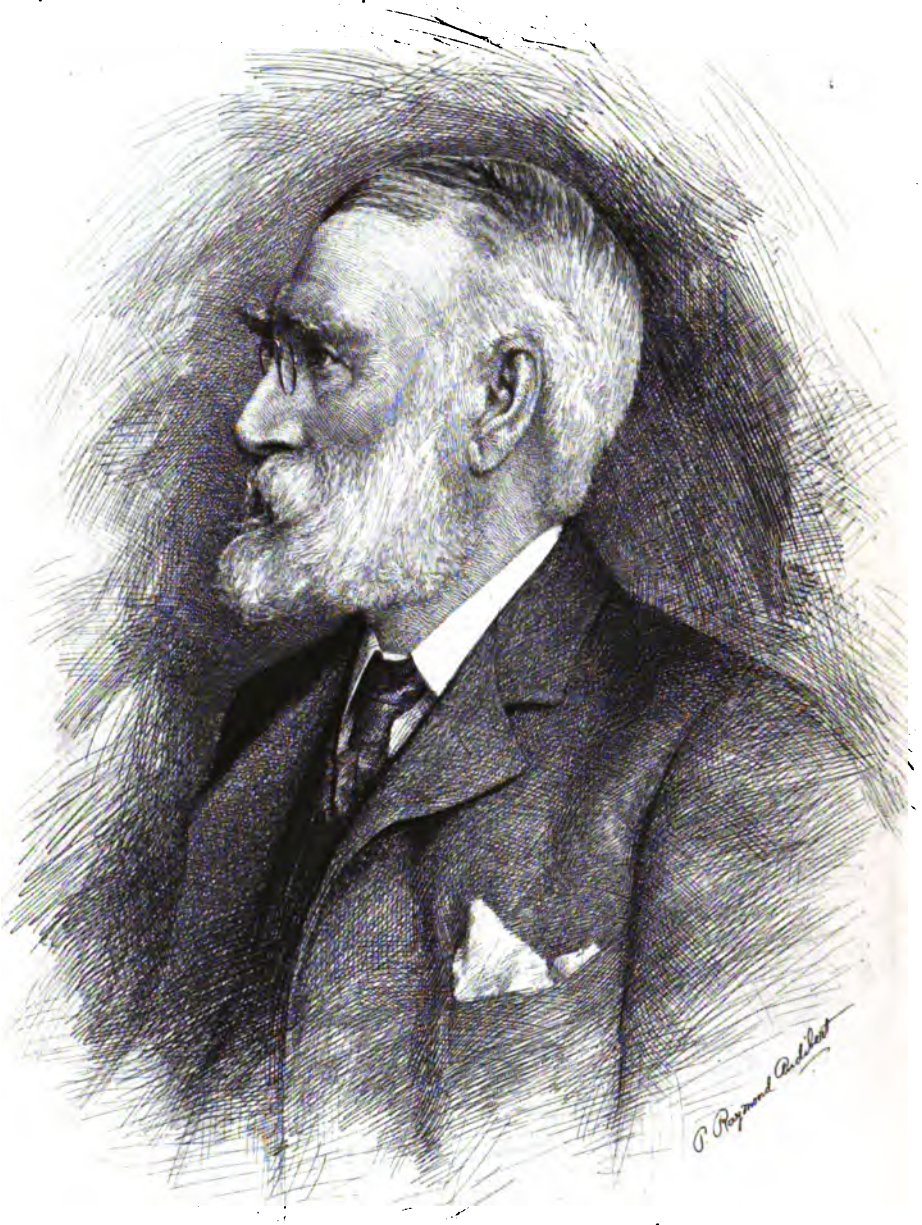


James Douglas

the country, and at the same time to meet the problem of rapid transportation from the street to the topmost floor. Beside elevators of all types, the Otis Company manufacture the escalator, adopted from the Latin «scala»—prefix «e»—suffix «tor»—translation, «means of traversing from»; these machines being used principally to carry large numbers of people from one level to another, either ascending or descending. They have been adopted by department stores, railway stations, and elevated and subway roads. The Otis Company maintains a large number of offices in the principal countries of the world; in the United States there are over 52 offices, and Canada, Mexico, and South America are well represented. London, England, is headquarters for foreign business, and in all the principal cities of the world may be found branch offices or agents of the company. The largest factory of the company, where the majority of the electric elevators are constructed, is at Yonkers, N. Y., 1,800 persons being employed there in various capacities. There are also factories at Chicago, Ill., Peru, Ind., Quincy, Ill., Harrison, N. J., Houston, Texas, Buffalo, N. Y., and San Francisco, Cal., and within the past year factories have been opened at Berlin, Germany, and in Russia.

Mr. Baldwin has seen much of Europe and aside from his stay there in connection with business affairs has visited it many times since. Golf is his principal recreation. He is a member of the New York Geographic Society, and the Union League, Lawyers', Engineers, Raquet and Tennis, Calumet, Fulton, New York Athletic, St. Andrews Golf, National Arts, and Adirondack League clubs. On October 19, 1881, he was married at Montclair, N. J., to Helen Runyon Sullivan, daughter of Nahum and Sarah Martin (Runyon) Sullivan. Five children are still living: Martin Sullivan (b. July 14, 1883, the husband of Hazel Talmage Smith), Delavan Munson (b. August 9, 1886), Louise (b. July 8, 1889), Runyon Sexton (b. August 24, 1893), and Roland Dennis (b. May 29, 1896).

James Douglas

James Douglas was born at Quebec, Canada, November 4, 1837. His father, Dr. James Douglas, was a surgeon of repute, and the first to introduce modern treatment of insanity into Lower Canada as the founder of the Quebec Lunatic Asylum, in the management of which for some time his son James participated. His son was educated partly in Canada, and partly in Germany and Scotland. Mr. Douglas is an A. B. of Queens University, Canada; studied medicine at Laval University, Quebec, but did not graduate; and is an honorary LL.D. of McGill University. He was professor of chemistry at Morrin College, Quebec. He acquired his first experience in mining and metallurgy through his connection with the Harvey Hill Mines and other mining properties in Lower Canada, now the Province of Quebec, in which his father was very heavily interested. Mr. Douglas left Canada in 1875 to take charge of the metallurgical operations of the Chemical Copper Company, a concern whose works were erected at Phoenixville, Pa., to extract the copper from the cupriferous portions of the iron ores of the Jones mine, an abandoned iron deposit in that neighborhood. The amount of ore available being inadequate, the company turned its works on Western copper matte and was the first to separate, on a commercial scale, the precious metals from the copper by the electrolytic method of refining.

It was while connected with the Chemical Copper Company that Dr. Douglas made his first trip to Arizona in 1880, and visited the Copper Queen mine, which had then been recently opened. In 1881 he examined for Mr. James and Mr. Dodge the property of the Detroit Copper Mining Company of Arizona, and recommended that they interest themselves in its development. At his suggestion the same gentlemen bought property in the Warren District at Bisbee, adjacent to the Copper Queen mine. These mining claims in 1885 had become productive, and were absorbed into a new organization known as the Copper Queen Consolidated Mining Company, of which Mr. Douglas became president. Under his administration larger works were built for the treatment of the ores of the consolidated company, and a short line of railroad, the Arizona and South Eastern Railroad, was constructed from Bisbee, where the Copper Queen mine was located, to Fairbanks, Arizona, on the New Mexico and Arizona branch of the Santa Fé Railroad. The character of the ore of the Copper Queen mine changing from oxydized to sulphuretted compounds, the pneumatic method of reducing the copper mattes to metallic copper, which was introduced into the Southwest by the Copper Queen, was adopted. As a result the operations of the company expanded so rapidly that the removal of the smelter from its confined position near the mines to a site where expansion was possible, became imperative; and a large smelter, of a capacity of from ten to twelve million pounds of copper a month, was erected at Douglas, in the Sulphur Spring Valley, some 28 miles to the southeast of Bisbee, and the railroad extended to that point. The increased production of the company by that time warranted the further extension of the Arizona and South Eastern Railroad to El Paso, Texas; and the road was renamed the El Paso and Southwestern Railroad Company. In the interval Mr. James and Mr. Dodge had purchased the Moctezuma Copper Company mines located 70 miles south of the frontier in Sonora, Mexico, and gradually developed them into such proportions that railroad connection with the El Paso and Southwestern system had

to be made with the smelting works of the Moctezuma Copper Company at Nacozari. Mr. Douglas from the first has been president of the reorganized Moctezuma Copper Company, and likewise of the Nacozari Railroad, which is now incorporated into the El Paso and Southwestern system.

The advantages which would accrue to the smelting operations of the Copper Queen and the other mining enterprises of the associated companies, by the possession of their own fuel supplies, rendered desirable further expansion of the railroad. The nearest available coal mines were at Dawson in northern New Mexico. They were purchased by the individuals whose holdings controlled the copper companies; and with the coal mines were purchased the railroads which connected them with El Paso, thus bringing the mileage of the railroads, which were primarily secured in order to serve the interests of the copper companies, up to 1,094 miles. Mr. Douglas, who is president of all the copper companies, is likewise president of the railroads, which serve as such important auxiliaries to their metallurgical and mining interests. As however the railroads have become important transportation elements to the whole Southwest, they are run scrupulously on railroad principles; and no discrimination of any kind is made in favor of the interests, which were the original motives for the building or the acquisition of these means of transportation.

The Detroit Copper Mining Company mines, in which Mr. James and Mr. Dodge became interested, really in advance of their purchasing any property in the neighborhood of the Copper Queen, have developed a capacity of 2,000,000 pounds of copper a month. These are located at Morenci, Arizona, and are connected with the New Mexico and Arizona Railroad by a very tortuous and picturesque line of railroad—the Morenci Southern.

Upon the death of Mr. Dodge and Mr. James it became desirable to consolidate the ownership of these copper properties into one, and therefore they were incorporated into Phelps, Dodge and Company, which was formed with a capital of $50,000,000; $45,000,000 of its stock being issued for the purchase of the stock of the Copper Queen Consolidated Mining Company, the Moctezuma Copper Company, the Detroit Copper Mining Company of Arizona, and the Stag Canon Fuel Company. Mr. Douglas is also president of the corporation of Phelps, Dodge and Company.

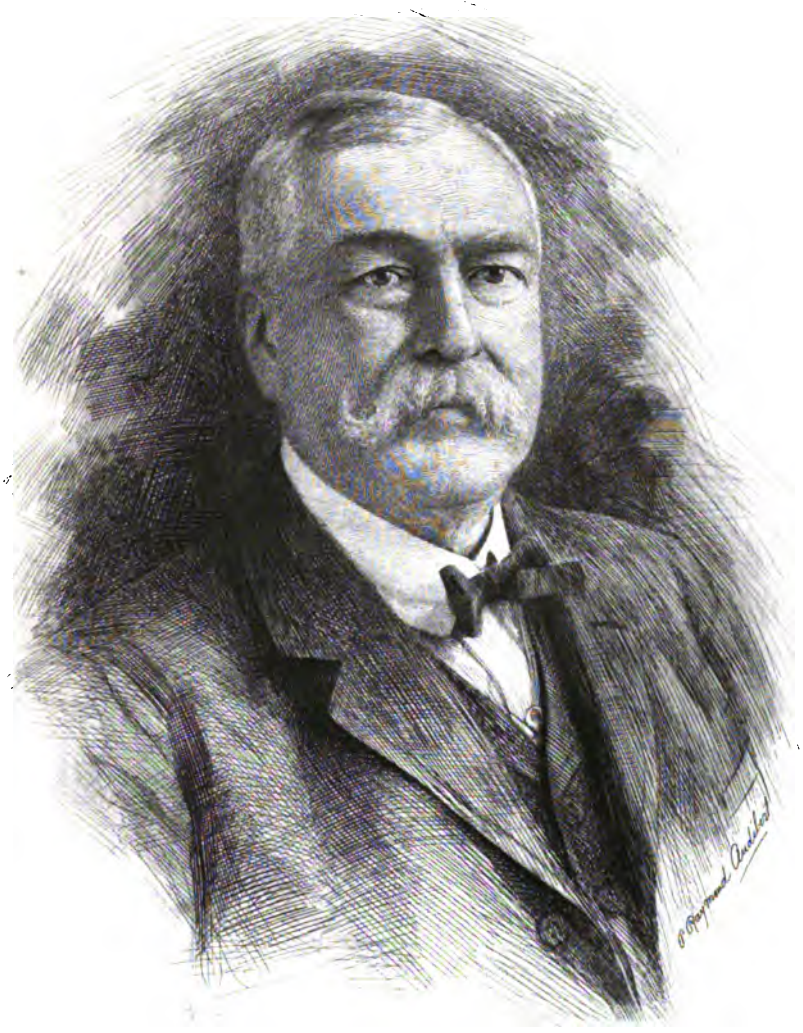
Mr. James and Mr. Dodge had acquired a large holding of mining property at Globe, Arizona, which was operated as the United Globe Mines. This property was incorporated into the Old Dominion Company of Maine, a holding company for the merger of the stocks of the Old Dominion Copper Mining and Smelting Company and the United Globe Mines. A strong organization was then created, which has raised the Old Dominion Company into a very productive and financially successful operation. Mr. Douglas is likewise president of the Old Dominion Company of Maine.

Mr. Douglas is the author of 'Canadian Independence'; a sketch of the life of Dr. T. S. Hunt; 'Quebec in the Seventeenth Century'; 'Journals and Reminiscences of James Douglas' (his father), and numerous literary and technical articles, reports, addresses and lectures, including a series of the Cantor Lectures, delivered before the Society of Arts of London. In connection with his partner, Dr. T. Sterry Hunt, he carried on investigations in the humid metallurgy of copper, and secured patents for the Hunt and Douglas methods, and other improvements. He is a member of several scientific and other societies, was twice president of the American Institute of Mining Engineers, is a gold medallist of the Institution of Mining and Metallurgy of London, is honorary president of the Literary and Historical Society of Quebec, and is a trustee of Queens University and the American Museum of Natural History. He is a member of the Century Association, the Engineers' Club, the City Club and the Adirondack League Club. In 1860 he was married at Frankfort, Germany, to Naomi Douglas, daughter of Walter Douglas of Scotland, and they have had two sons and four daughters.

Ohio Columbus Barber

Ohio Columbus Barber was born at Middlebury (now a part of the city of Akron), O., April 20, 1841, the son of George and Eliza (Smith) Barber. On the paternal side he is a descendant of an English family which settled in this country in the early part of the 17th century, about 1630. His father was a native of Connecticut and his mother of Ohio. George Barber settled at Middlebury, O., and there engaged in the coopering business until 1847 when he began the manufacture of matches, being one of the pioneers of that industry in the West. Since that time the entire industry has been revolutionized and in this transformation O. C. Barber has taken a conspicuous part.

He received only a common school education and at the age of 16 years began work in his father's manufactory, later being engaged in selling the product of the factory in Ohio, Indiana, Michigan, and Pennsylvania. In 1860 he was taken into partnership with his father, two years later assumed the entire management of the business, and in 1864 when a stock company was formed he took the position of secretary and treasurer, his father becoming president. There were at that time numerous other companies engaged in the same industry and competition was keen. In 1881, therefore, with the aid of several others, he merged a number of these companies with his own into the Diamond Match Company, and incorporated it on Janu-



O. C. Barber

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ary 1, 1881, under the laws of Connecticut, Mr. Barber being its vice-president from 1881 to 1888 and from the latter year until he retired its president, then assuming the office of chairman of the board of directors. The company now has a capital of $18,000,000 and employs 5,000 men and women.

In 1889 Mr. Barber assisted in organizing the Neracher and Hill Sprinkler Company which manufactured automatic sprinklers for extinguishing fires and three years later this company was merged with several others into the General Fire Extinguisher Company at New York, Mr. Barber becoming vice-president. In 1891 he and his associates founded the town of Barberton, O., now containing about 10,000 inhabitants, and where are situated some of the largest manufacturing industries of their kind in the world, including the principal factory of the Diamond Match Company, and also the plant of the National Sewer Pipe Company. Mr. Barber is also president of the First and Second National banks of Akron. The active career of Mr. Barber at this time was somewhat remarkable. He acted as president of some ten or twelve manufacturing concerns of large capital and influence.

Politically Mr. Barber is a Republican but he has never taken an active part in political affairs. He has been a liberal benefactor of deserving charities, and was the organizer and chief contributor to the Akron city hospital. He is a member of the Union League Club of New York and the Chicago Club of Chicago. On October 10, 1866, he was married at Akron, O., to Laura L., daughter of Daniel and Minerva Brown and of the same family as Cotton Mather, the famous New England divine of colonial days.

James Howell Cummings

James Howell Cummings was born at Goshen, Lancaster County, Pa., August 7, 1867, one of the three children of John and Sarah Elmira (Thompson) Cummings. His father for many years was treasurer of the Holmes and Edwards Silver Company of Bridgeport, Conn., and as a lieutenant of heavy artillery fought in the Federal army throughout the Civil War. The son, James, was educated in the public schools of Philadelphia and supplemented this with a course in the Central high school. In November, 1882, when 15 years of age, he entered the employ of John B. Stetson and Company, the well-known hat manufacturers of Philadelphia, beginning his service with that firm in the capacity of office-boy. He had soon mastered the details of the business and was rapidly promoted, his faithfulness and close application to his duties quickly establishing him firmly in the confidence of his employers. In 1891 the firm of John B. Stetson and Company was reorganized and incorporated as the John B. Stetson Company, with $2,700,000 capital (afterward increased to $8,000,000). to take over the business established by Mr. Stetson, and so highly thought of were his business capabilities and his sterling business integrity and so invaluable had he become that Cummings was appointed secretary of the new corporation. He was subsequently promoted to the positions of treasurer and second vice-president and when Mr. Stetson died on February 18, 1906, Mr. Cummings received the reward of long and faithful service by being elected president of the company.

The business has developed into what is said to be the largest hat manufacturing establishment in the world, Stetson hats having a world-wide reputation. The main factory is located at Philadelphia, has a floor space aggregating 26 acres and employs more than 5,500 persons. In addition to the usual departments connected with hat-making the company also maintains for its sole use several other departments such as the establishment for the treatment and cutting of furs; the shop for making exclusively designed blocks; the factory for weaving silk bands, bindings and braid; buildings where leather is cut and where dies are printed on leathers and tips; a paper box manufactory; shops where every piece of the machinery used by the company is constructed and repaired; and a general construction department having in charge the erection and maintenance of its buildings. The Stetson Company makes its hats exclusively of furs and in the manufacture annually uses the skins of more than 13,000,000 fur-bearing animals, every clime furnishing its quota to make up this enormous total. The skins of the nutria, collected from the river regions of Argentina, are shipped to Philadelphia from Buenos Ayres; while from Germany come the best hare skins that money can purchase; and the highest grades of Scotch coney skins are also bought. The only fur that is not imported is the beaver skin which comes from northwest America.

In addition to his duties as president of the Stetson Company Mr. Cummings is also connected with several other enterprises and institutions. He is a director in the Bank of North America at Philadelphia, which is the oldest bank in the United States; is a director in the firm of Erben, Harding and Company, a trustee of the Penn Mutual Life Insurance Company, executor of the estate of John B. Stetson, and is president of the Stetson Hospital of Philadelphia. On February 22, 1890, he was married to Annie C. Richards, daughter of H. M. Richards of Philadelphia, and to them have been born one son: J. Howell Cummings, Jr., and three daughters: Marie R., Elizabeth S., and Eleanor F. Cummings. Mr. Cummings has traveled extensively in Europe, Mexico, Canada, and the United States. His chief recreation is horseback riding.

Dumont Clarke

Dumont Clarke was born at Newport, R. I., October 1, 1840, and died at Dumont, N. J., December 26, 1909. He was the son of Peleg and Caroline Moore Clarke. He came from an honored ancestry, being a direct descendant of Jeremiah Clarke, one of the early governors of Rhode Island, whose wife was Frances Latham, daughter of Lewis Latham, Sergeant-Falconer to King Charles the First of England. His grandfather, Audley Clarke, was one of the founders and president of the Bank of Rhode Island, and his father, Peleg Clarke, was president and director of the same institution at the time of his death.

Mr. Clarke was educated in a private school at Newport, R. I., with the idea of entering the ministry, but his father died when Dumont was 23 years of age and he was then compelled to give up his chosen calling and was never ordained. Deciding to seek his fortune on the Pacific Coast he went to California where he became a merchant, remaining a short period and meeting with moderate success. At the end of this period he returned to Newport and entered his grandfather's bank as cashier, but he soon afterward resigned this position to go to New York where he entered the American Exchange National Bank. For the next six months he occupied the position of check clerk, but his inherent ability and force of character soon brought him promotion and he was advanced to demand loan clerk. In 1868 he was made assistant cashier, 10 years later was promoted to the position of cashier, and in 1883 became a director in the institution. In 1887 he was elected vice-president, and in 1894, when the president, George S. Coe, retired, he was elected to the presidency, which position he held up to the time of his death.

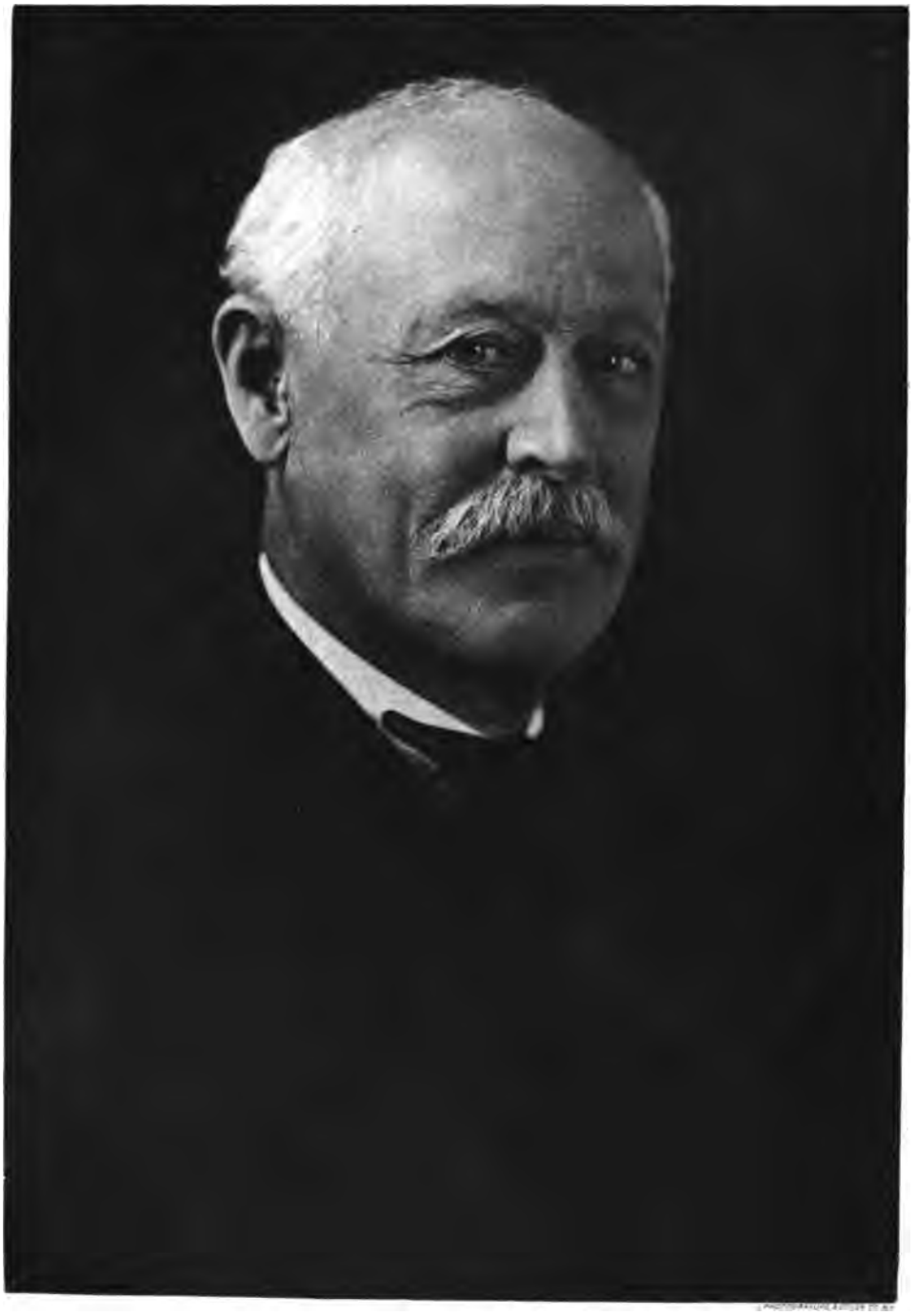
In addition to being president of the American Exchange National Bank, Mr. Clarke had many and varied business interests throughout the county. He was president of the Clearing House for two terms, and chairman of the committee on finance of the Chamber of Commerce, which office he resigned in 1907. He was one of the advisers of J. Pierpont Morgan, in connection with measures taken by the latter to restore confidence during the panic of 1907, and was prominent in the reorganization of the Mutual Life Insurance Company, consenting to be named on the directorate chosen after the investigation; he also had much to do with shaping the official utterances of the American Bankers' Association.

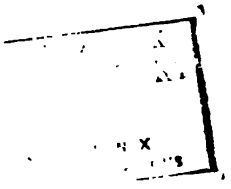
Mr. Clarke was identified with many important corporations. He was a trustee or director in the following companies: American Beet Sugar Company, American Felt Company, the Audit Company of New York, Caledonian Insurance Company of Edinburgh, Commercial Cable Company, Commercial Cable Company of Cuba, Delaware and Hudson Company, Federal Sugar Refining Company, Fidelity and Casualty Company, Home Insurance Company, Hudson Companies, Lake Superior Corporation, Lawyers' Title Insurance and Trust Company, Knickerbocker Trust Company, Long Island Consolidated Electrical Companies, Long Island Railway Company, the Mackay Companies, Manhattan Railway Company, Mutual Life Insurance Company of New York, New York, Brooklyn and Manhattan Beach Railroad, New York Clearing House Building Company, Orange National Bank, Press Publishing Company, Swift and Company, United States Mortgage and Trust Company, United States Safe Deposit Company, Washington Life Insurance Co., etc., and member of the board of managers of the Adams Express Company.

Mr. Clarke was very fond of the country and very seldom left his Jersey home at Dumont for a long period, either in summer or winter. He lived for a time after his marriage at Washington Heights, but decided to take up his residence in the old Dutch borough of Schraalenburg, N. J. He was elected mayor of that town, serving in that capacity for ten years, and took such a deep interest in its affairs and devoted so much of his thought and time to its improvement that it was renamed Dumont in his honor. Outside of his business cares Mr. Clarke's chief pleasure was yachting and he took great pride in his boat Surprise, which was one of the finest pleasure craft afloat. He was a member of several yachting clubs, including the New York Yacht Club, but did not ally himself with the purely social clubs of New York or with other metropolitan organizations to which men of his position usually belong. His benefactions were many, though confined chiefly to the poor in and around Dumont, and he took especial delight in personally directing his charities. He would send his son Stanley to the homes of those he thought in need to inquire as to their wants and soon afterward the need was quietly filled. It was all done with the least possible ostentation and generally took the form of coal, eatables, etc., rather than money, although he was a generous contributor to charitable objects.

On May 20, 1869, he was married at Castleton, Vt., to Cornelia P. Ellery, and to them were born four sons: Lewis Latham, who succeeded his father as president of the bank, Stanley, Ernest (deceased) and Dumont, and five daughters: Mary (Mrs. George B. Case), Alice, Corinne, Maud and Martha (died in infancy).

The career of Dumont Clarke ensures his being ranked among the financial geniuses of his period. Conservative in his methods, the conscientious guardian of the interests of his depositors, and a man of unerring judgment, Mr. Clarke's influence was great and was always exerted for sound business principles. His death not only removed from the ranks of his profession one of its most gifted members, but was felt as a personal loss by all his contemporaries. He was held in affectionate regard by his business associates, his subordinates, and by his neighbors, rich and poor. In passing, he has left a gap which it will be difficult to fill.





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Frank Sullivan Smith

Frank Sullivan Smith was born at Granger, Allegany County, New York, the son of Dr. William M. Smith (who was formerly a brigade surgeon in the Civil War, surgeon-general on the staff of Governor John A. Dix and health officer of the port of New York) and Adeline (Weeks) Smith. His paternal ancestors were English and Dutch and came to America in 1626. After the usual elementary education at Angelica Academy at Angelica, N. Y., where he then resided, Frank Sullivan Smith entered Yale University whence he was graduated in 1872 with the degree of A. B. He served a term as school commissioner in Allegany County and then studied law and was admitted to the bar and after practicing nine years in Allegany County he opened an office for the general practice of his profession in New York City, still maintaining his residence at Angelica. He was New York counsel to the receivers of the Richmond and Dansville Railroad (now the Southern), was counsel in the reorganization of the Rome and Decatur Railroad Company, the litigation involving the validity of the bonds of the East and West Railroad of Alabama, the reorganization of the Pittsburg, Shenango and Lake Erie Railroad and the Scioto Valley Railroad and the formation of the Pittsburg, Bessemer and Lake Erie Railroad, and the long continued litigation relative to the Allegheny and Kinzua Railroad, as well as for the New York and Portchester Railroad.

He also brought several suits for persons who suffered through the formation and financing of the United States Shipbuilding Company, in all of which he obtained satisfactory settlements. In addition he has also become connected with a large number of transportation, mining and other companies, at the present time being vice-president, acting president and receiver of The Pittsburg, Shawmut and Northern Railroad Company; president of the Shawmut Mining Company, The Kersey Mining Company, the Shawmut Coal and Coke Company and the Olean Land Company; vice-president of the Wilson River Lumber Company, treasurer of the Higgins Land Company and a director in the Hamilton Trust Company and the American Light and Traction Company.

In 1887 Mr. Smith was tendered the position of dean of the College of Law of Cornell University but could not see his way clear to accept the offer. In 1902-5 he was a member of the State Board of Law Examiners and was again appointed by the Court of Appeals in 1909 a member of the Board and has since continued to hold that position. He began his political career in 1884 when he became a delegate to the Republican national convention at Chicago and from 1887 to 1891 he was secretary of the Republican state committee. He is a member of the American Bar Association, the New York State Bar Association, the Association of the Bar of the City of New York and the Society of Medical Jurisprudence. He is also a trustee of Alfred University, which in 1903 conferred upon him the degree of LL. D., and is a trustees of the State School of Agriculture at Alfred, N. Y.

On October 17, 1877, Mr. Smith was married to Clara A. H. Higgins, sister of the late governor of New York, Frank W. Higgins. His chief recreations are shooting, fishing and motoring and he is also a member of numerous clubs and social organizations such as the University, Barnard, Republican, St. Andrews Golf, Alfred, Hamilton Country, Olean City, Ellicott of Buffalo, N. Y. and the Triton Fish and Game of Canada. He also is an honorary member of the Association of the 85th New York Volunteer Regiment, a member of the Society of the War of 1812, the Military Order of the Loyal Legion and is also a member of Wolf's Head Society (Yale), the Alpha Delta Phi and Phi Alpha Delta fraternities.